Part 3

DESCRIPTION OF CHECKING AND ADJUSTMENT

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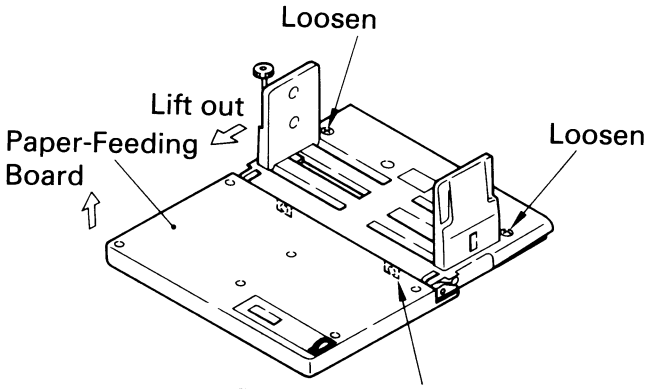
ADJUSTMENT OF MECHANISM

1. FIRST PAPER FEED AREA

1. Removal of Paper-Feeding Table Unit

(1) Lower the Table to the bottom.
(2) Remove the 2 screws under the table.
(3) Loosen two of the 4 plate screws inside the Table.
(4) Disconnect the Paper Detection Sensor connector.
(5) Move the Table upward gently and pull it out.

!!ATTENTION!!
Do not forget to connect the connector of the Paper Detection Sensor during installation.

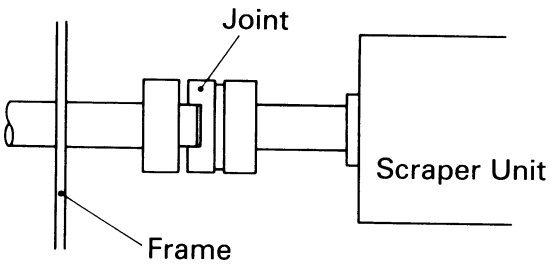


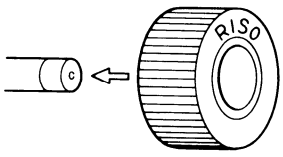
Take out two screws under the Table

2. Removal of Scraper Unit

(1) Remove the Master Removal Unit. **(refer to p. 35)**
(2) Remove the spring for paper feeding pressure adjustment.
(3) Loosen the 4 screws which fix the unit.
(4) Remove the unit gently.

!!ATTENTION!!
1. Be careful not to drop the connecting joint.
2. Be careful not to pull the spring stretched.
3. Be careful which way the Scraper Roller can rotate if it is replaced. (The Scraper Roller rotates one-way only.)



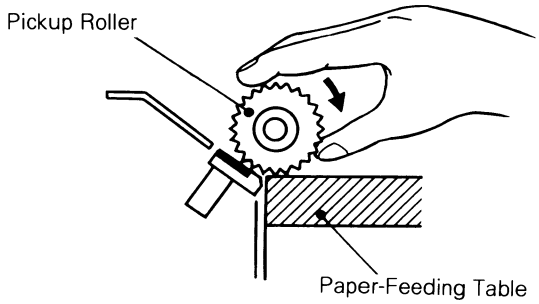


Put it on this way

3. Adjustment of the stop position of Paper-Feeding Table

(Adjustment of the pressure between the Table and the Pickup Roller)

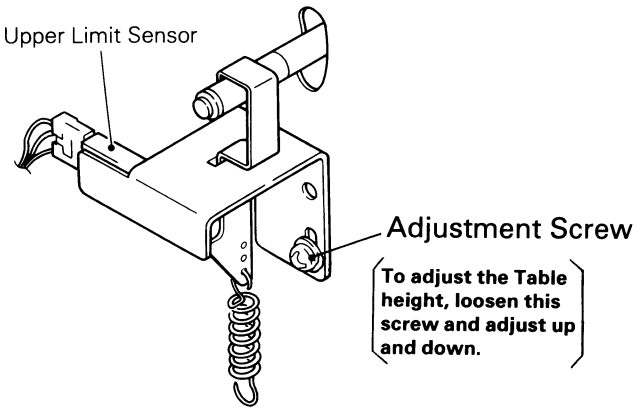
(1) Adjust the Upper Limit Sensor so that the Table can stop at the position where the front tip of the Table is slightly touched with the Pickup Roller with no paper on the Table.



Turn the Pickup Roller by hand to confirm that it is barely touching the Paper-Feeding Table.

!!ATTENTION!!

1. Do not set the Table stop position too low. This causes paper feed trouble.
2. Do not set the Table stop position too high. This causes stack paper feeding because of its high pressure.



To adjust the Upper limit Sensor, loosen this screw and adjust it up and down.

4. Removal of Stripper Unit

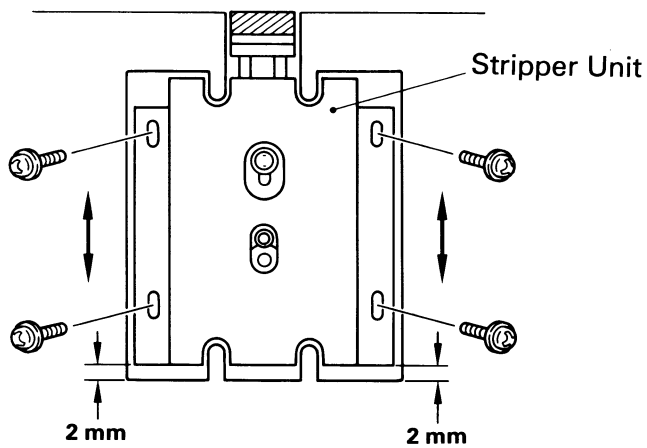
(1) Remove the 4 screws which fix the unit.
(2) Remove the connector of the Stack Paper Feeding Switch.
(3) Remove the unit gently.

!!ATTENTION!!

Do not forget to connect the connector of the Stack Paper Feeding Switch during installation.

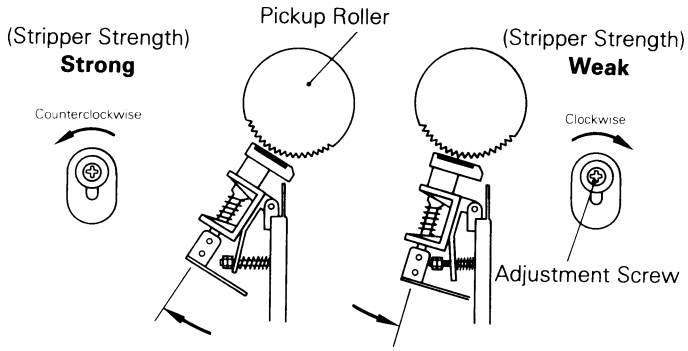
5. Adjustment of Stripper Unit

(1) Put in the four screws loosely so that the Stripper Unit can move up and down during installation.
(2) Adjust the Stripper Unit so that the bottom edge of it is 2 mm off the bottom line of the opening in the Paper Guide Plate.
(3) Tighten the screws in this state.



6. Adjustment of Stripper Plate Angle

(1) Use the Stripper Angle Adjustment Screw.
   a) Turn the screw clockwise to decrease the stripper strength.
   b) Turn the screw counter-clockwise to increase the stripper strength.

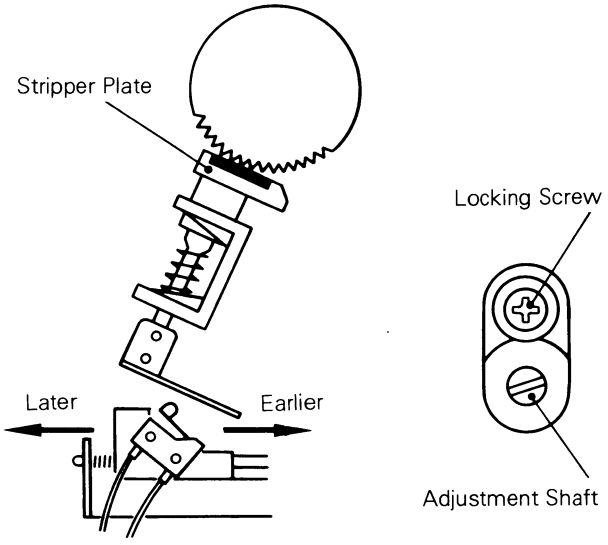


!!ATTENTION!!
After adjusting the Stripper Plate Angle, be sure to re-adjust the Stack Paper Feeding Switch.

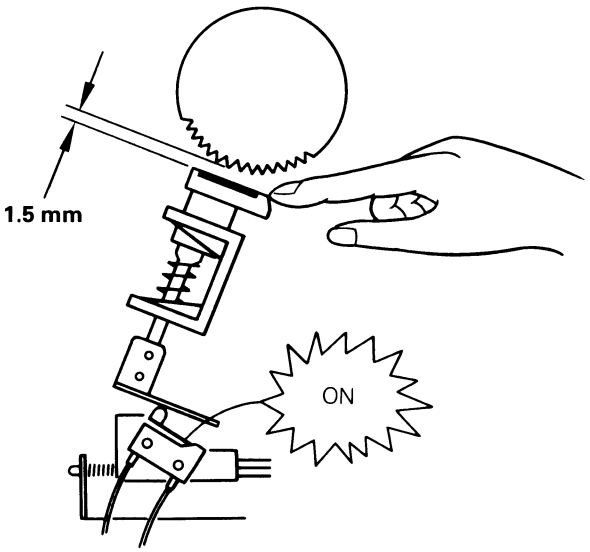
7. Adjustment of Stack Paper Feeding Switch

(1) Loosen the locking screw and turn the Adjustment Shaft all the way to the left.
(2) Gradually turn the Adjustment Shaft back to the right to the position at which the Stack Paper Feeding Switch switches ON when the Stripper Plate is pressed downward approximately 1.5 mm.
(3) Tighten the locking screw.
(4) Turning the Adjustment Shaft to the right will speed up the detection of stack paper feeding. Turning it to the left will slow down the detection of stack paper feeding.

!!ATTENTION!!
1. After completing the adjustment, press down on the Stripper Plate and release it in order to confirm that the Stack Paper Feeding Switch switches ON and OFF correctly.
2. When the Stack Paper Feeding Switch switches ON, the Paper Feed Clutch stops operating and paper-feeding also stops, so that "PAPER JAM: LEFT SIDE" is displayed on LCD. If the Stack Paper Feeding Switch has been adjusted to detect stack paper feeding too early (that is, pressing downward much less than 1.5 mm switches ON the Switch.), the Switch can be ON even when stack paper feeding has not occurred during printing and "PAPER JAM:LEFT SIDE" will be displayed. So make the adjustment carefully.



Stack Paper Feeding Detection



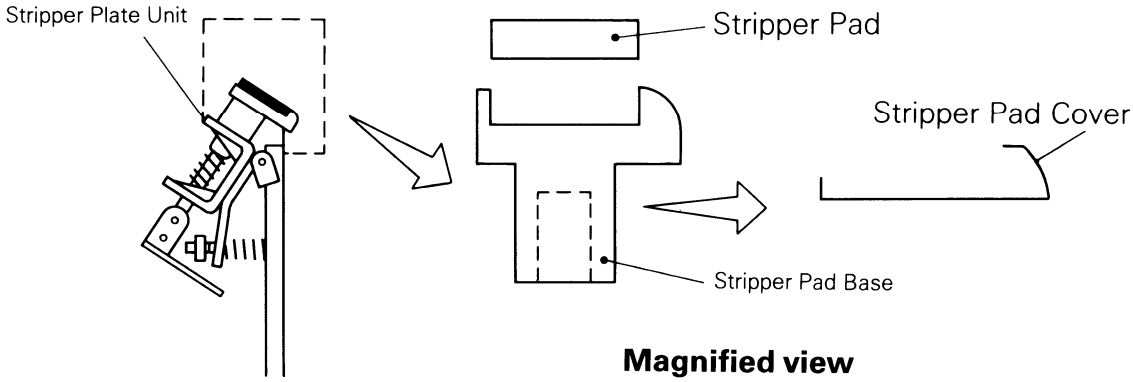
8. Replacing of Stripper Pad

(1) Removal of the Stripper Pad
   a) Remove the Stripper Unit from the paper feed assembly.
   b) Remove the Stripper Pad Base by pulling it up.
   c) Slide the Stripper Pad Cover off and remove the Stripper Pad.

(2) Installation of the Stripper Pad
   a) To install a new Stripper Pad, apply a rubber-type glue to the inside of the Stripper Pad Base only.
   b) Then place the Pad firmly and evenly into the Base.
   c) Put on the Stripper Pad Cover.

!!ATTENTION!!

1. **When attaching the Stripper Pad, use a rubber-type glue.**
2. **It may be necessary to re-adjust the Stripper Plate Angle and the Stack Paper Feeding Switch after installation.**



Magnified view

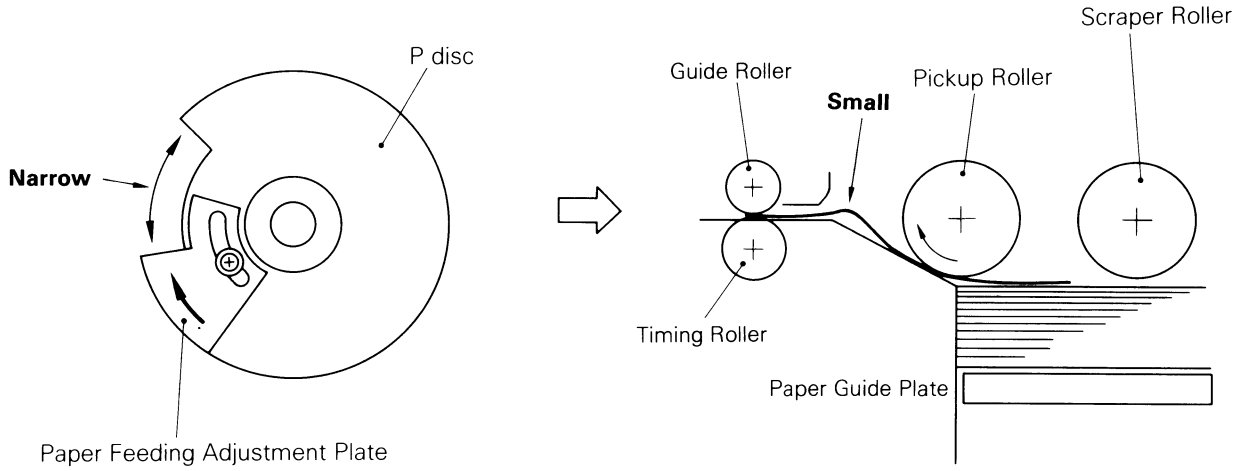
9. Adjustment of Paper Feeding Range

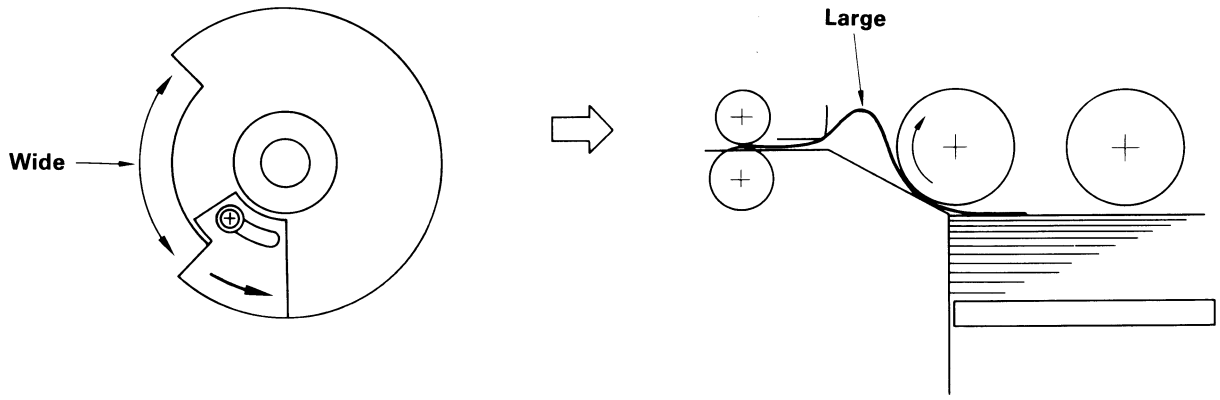
(1) The range of Paper Feeding can be changed with the Paper Feeding Adjustment Plate on the P Disc.

(2) If you have the cut part of P Disc smaller by sliding the Plate to the right, the range of Paper Feeding will be shorter and paper buckle will be smaller.

(3) If you have the cut part of P Disc larger by sliding the Plate to the left, the range of Paper Feeding will be longer and paper buckle will be larger. (See the figures below.)

(Note)
It is better to shorten the range of Paper Feeding when hard paper is printed.





2. SECOND PAPER FEED AREA

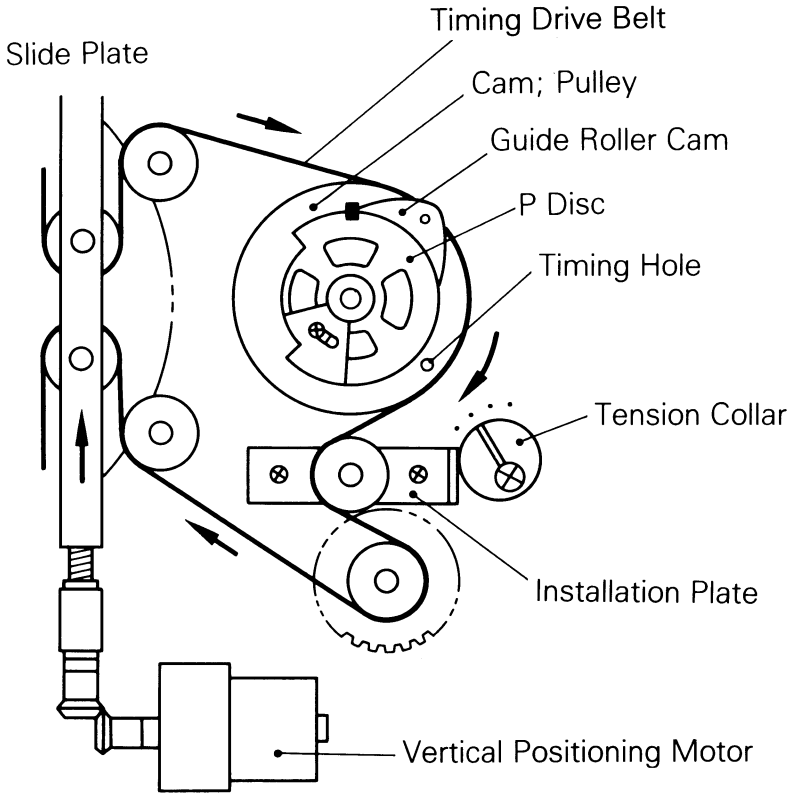
1. Adjustment of Timing Drive Belt Tension

(1) Position the Drum at the home position and reset the vertical position to the center.
(2) Loosen the screws on the Tension Collar and Installation Plate.
(3) Lift up the Belt and rotate the Cam Axis counterclockwise.
(4) Install the Belt so that the Timing hole on the Cam Axis is matched with that on the Top Face Plate.
(The position may shift when tension is applied.)
(5) Apply tension to the Belt by turning the Tension Collar, and tighten the screws. (The standard Collar position is at the third point from the right.)

2. Adjustment of Vertical Position

(1) Set the original for adjustment in the Original-holder and make a Master, and then print at medium speed (at speed 4).
(2) If there is a substantial (more than 20 to 30 mm) misalignment of the printing position, adjust the Belt timing. (If the Belt timing is one tooth off, the printing position will be approximately 12 mm out of alignment.)
(3) Fine adjustments of the printing position are made by adjusting the installation position of the Guide Roller Cam. The standard installation position is at the center of the oval hole. Moving the installation position of the Guide Roller Cam to the right will lower the printing position.
(4) To adjust the Guide Roller Cam, loosen the two screws in the oval holes on the Timing Cam.

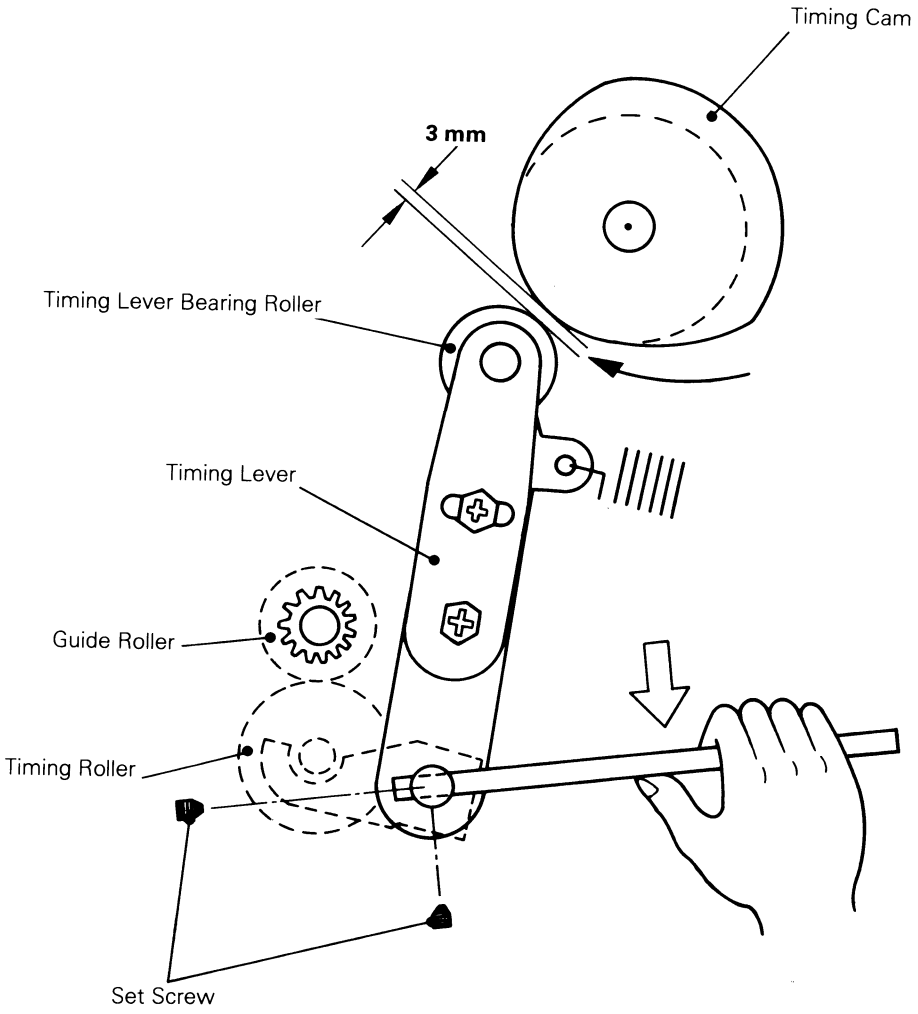
!!ATTENTION!!
When the printing position is all the way up or all the way down, confirm that the Positioning Motor is not locked.



3. Timing Lever Adjustment

(1) Rotate the Drum and position the Timing Cam so that the part opposite the lobe of it comes to the bearing of the Timing Lever.
(2) Loosen the two set screws on the Timing Lever.
(3) Maintain a clearance of 3 mm (X in the figure) between the Timing Lever Bearing and the Timing Cam, and raise the Timing Roller up to the Guide Roller by turning the Timing Roller Shaft clockwise with a tool, as shown in the figure below.
4) Tighten the screw on the Timing Lever in this state.

!!ATTENTION!!
If the adjustment is correct, the Bearing will float about 2 to 3 mm at the condition shown in the figure below.
If the adjustment is so incorrect that there is no gap between the Bearing and Timing Cam, bad paper feeding or positional hunted printing happens.



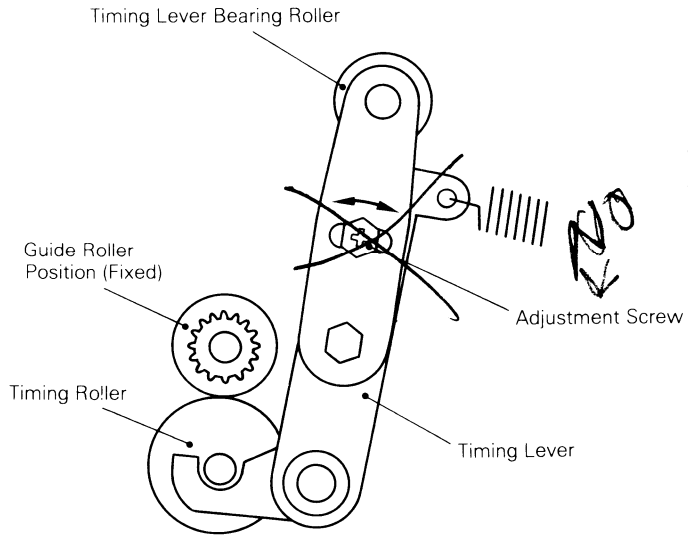
4. Adjustment of Timing Roller

‹Normally this adjustment is not necessary. However, in the case paper should slip or wrinkle in the Second Paper Feed Area, follow the steps below.›

(1) If necessary, adjust the Timing Roller to be level with the Paper Guide Plate when it is at the resting position. To adjust it, loosen the Adjustment Screw on the Timing Lever and move the Timing Lever Bearing Roller till the Timing Roller is level with the Paper Guide Plate.
(Moving the Bearing Roller to the Timing Cam will lower the resting position of the Timing Roller.)
(Moving the Bearing Roller off the Timing Cam will raise up the resting position of the Timing Roller.)

(2) To adjust the even pressure from side to side, loosen the Eccentric Cam Screw and turn the Eccentric Cam so that there is even pressure at each end of the Timing Roller and the Guide Roller.

Figure 1 (Motor Drive Side)



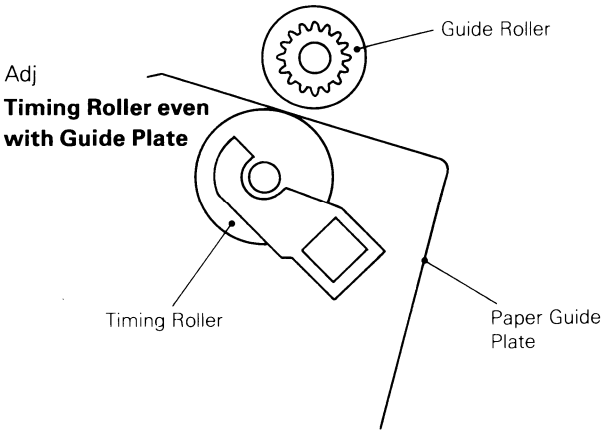
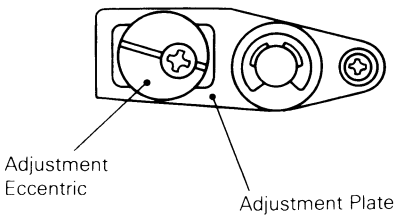
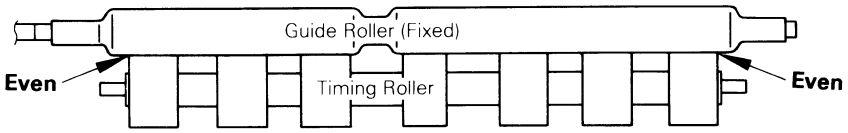


Figure 2 (Operation Panel Side)





!!ATTENTION!!
After adjustment, re-check the Timing Lever adjustment to the Timing Cam and adjust it if necessary.

3. PRINT AREA

1. Removal of Squeegee Unit

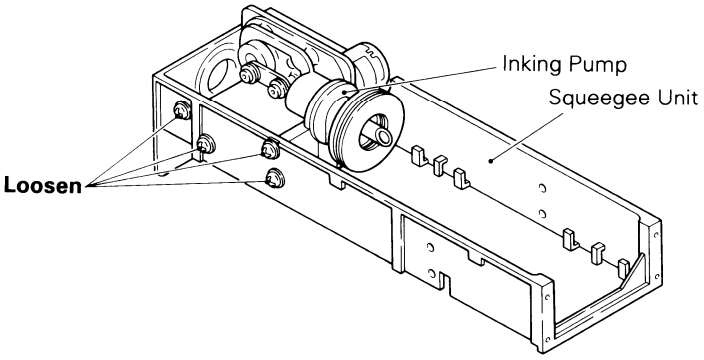
(1) Pull out the Drum from the machine.
(2) Stand it with the Lever side down.
(3) Remove the 3 screws that fix the Unit on the Drum Body.
(4) Pull up and off the Drum Body gently.

!!Attention!!
1) Be careful not to damage the Drum Body or Screen, especially by the Ink Blocking Plates.
2) Be careful not to damage Support Rollers when installing the Unit into the Drum Body.
3) Pay attention to the setting angle of the Drum Body to the Squeegee Unit.

2. Removal of Inking Pump Unit

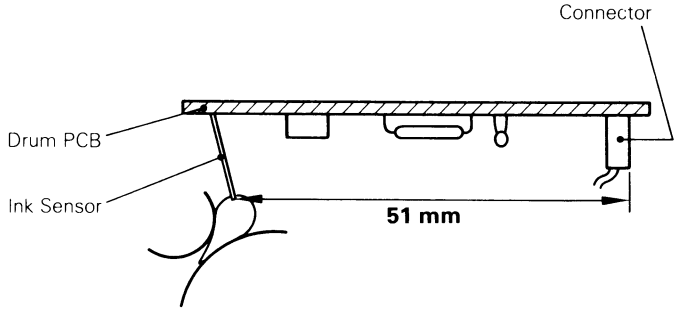
(1) Pull out the Ink Bottle from the Squeegee Unit and remove the Ink Bottle Cover.
(2) Remove the four screws that attach the Inking Pump Unit to the Squeegee Unit.
(3) Lift up the Inking Pump Unit and disconnect the connectors on the Drum PCB.
(4) Remove the cords from the Ink Bottle Switch and take the Inking Pump Unit out of the Squeegee Unit.

!!Attention!!
1) Install the Inking Pump Unit horizontal so that the Bottle is firmly set.
2) Set the Ink Bottle Cover so that it is out of touch with the Ink Bottle.
3) Adjust the Bottle Guide so that the Ink Bottle Switch will be pressed ON when the Ink Bottle is inserted into the Squeegee Unit.
(Be careful not to connect the cords to the wrong position of the Switch.)



3. Adjustment of Ink Sensor

(1) Set the Ink Sensor angle so that the distance from the tip of the Sensor Pin to the connector at the opposite side is 51mm as shown in the figure.

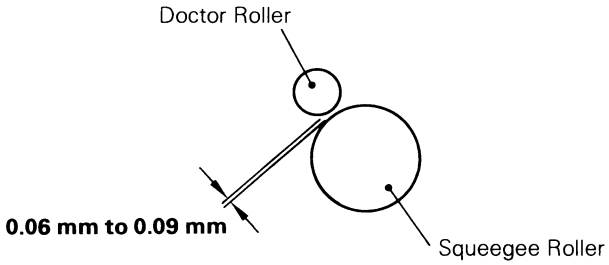


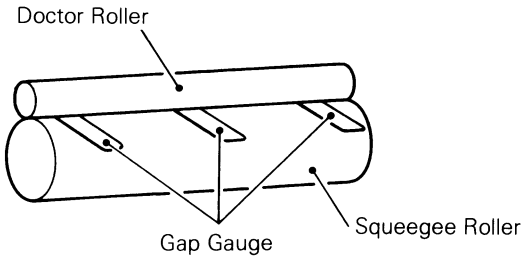
(2) Depending on the angle of the Sensor Pin, the thickness of the ink shaft changes.
If the angle is too vertical, the ink shaft gets too thin and good print will not be available, especially in solid printing.
In this case adjust the angle so as to make the ink shaft thicker.

4. Gap Adjustment

(1) Remove all ink from the inside of the Squeegee Unit.
(2) Loosen the Locking Nut on each end of the Squeegee Roller.
(3) Turn the Gap Adjustment Screw on each end so that the gap value will be equally between 0.06 to 0.09mm from end to end.
(4) Tighten the Locking Nuts holding the Screws in this condition.

!!Attention!!
1) Having the gap wider will increase the amount of ink supplied to the Drum.
2) Do not make the gap too wide or too narrow because ink leak or weak print will happen.
3) Make sure that the gap is even from end to end on the Roller.





!!Attention!!
1) Be careful not to make the Drum PCB dirty with ink.
2) Be careful not to set the Ink Blocking Plates too inside.

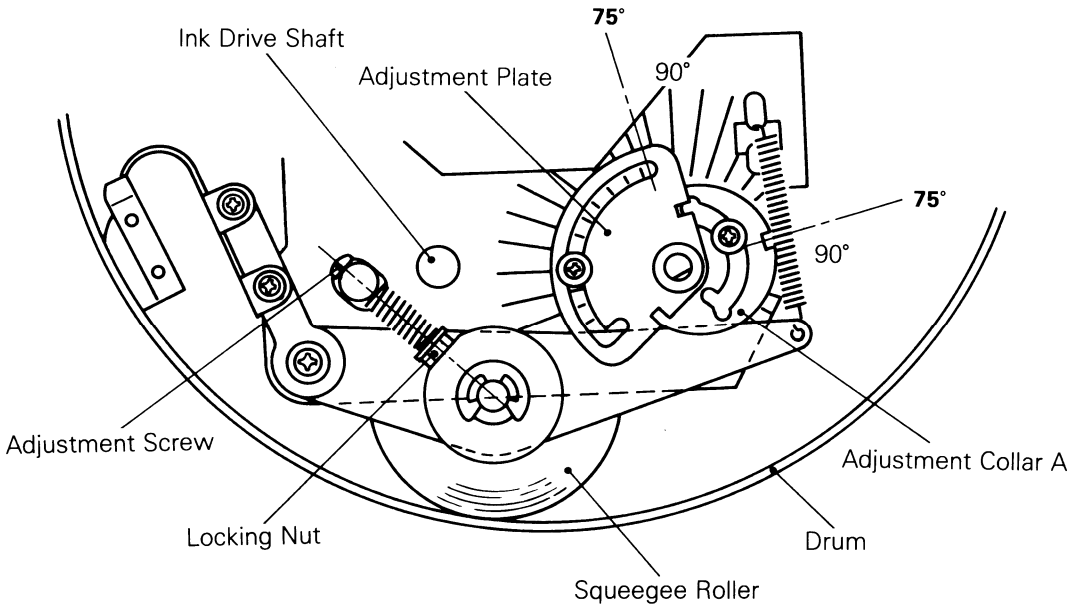
5. Squeegee pressure adjustment (Print Contrast Adjustment)

(1) The contrasts on both left and right sides can be balanced by the Squeegee pressure adjustment.

(2) The Squeegee pressure on this side (the panel side) is adjustable by the Adjustment Collar A and that on the other side (the drive side) is by the Adjustment Plate. Turning both the Collar A and the Plate clockwise makes high contrast printing because of higher Squeegee pressure.

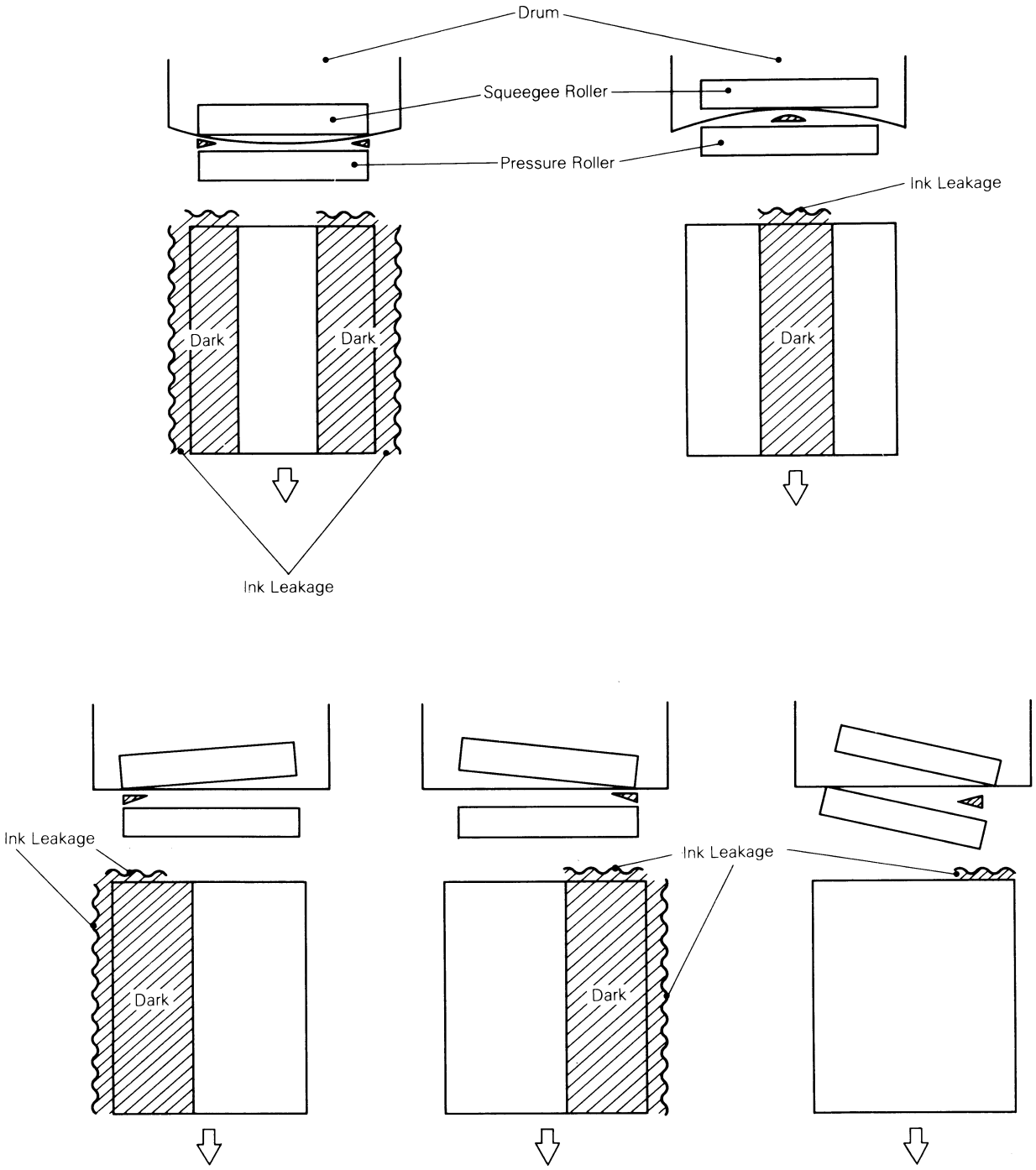
(3) The standard positions of the Collar A and the Plate are as shown below.

(4) If the Squeegee pressure is too high or not balanced on both sides, the ink will leak from the bottom or side of the screen after many sheets of printing. In this case it is necessary to adjust the Squeegee pressure correctly and make sure that no ink leaks by running 500 or 1000 copies with a blank Master after adjustment. **(Refer to P16.)**



(For Reference)

<In case of the wrong adjustment of the Squeegee Roller>

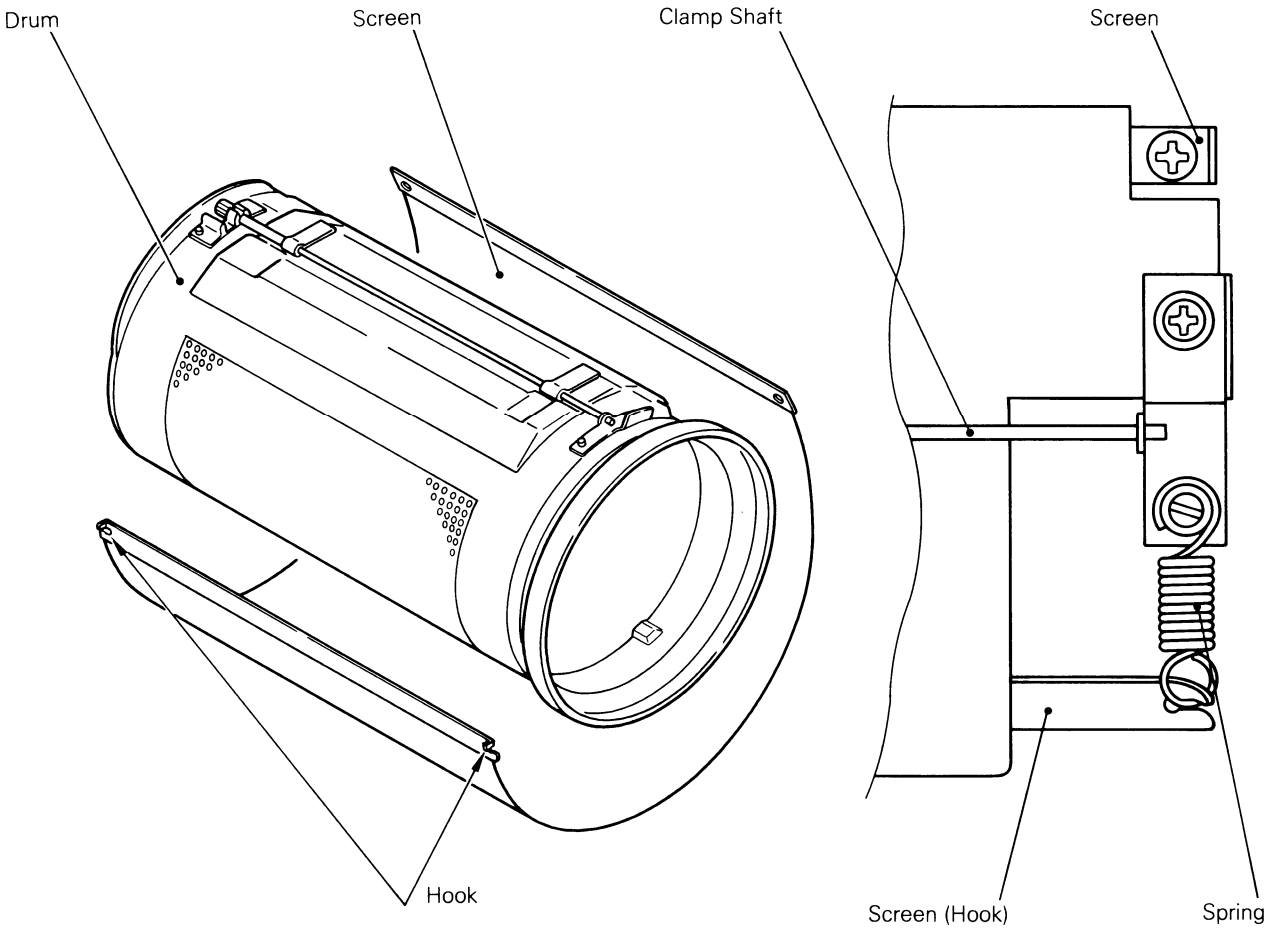


6. Removal and Installation of Screen

(1) Loosen the four screws that fix the Clamp Plate Base and Compensator on the Drum Body.
(2) Remove the two springs that give tension to the Screen.
(3) Remove the two screws that attach the Top Screen Plate to the Drum Body.
(4) Pull out the Top Screen Plate under the Base and remove the Screen from the Drum Body.
(5) When installing the screen, make sure that there is no wrinkle on it, and that the bottom edge of it has been folded back.

!!Attention!!

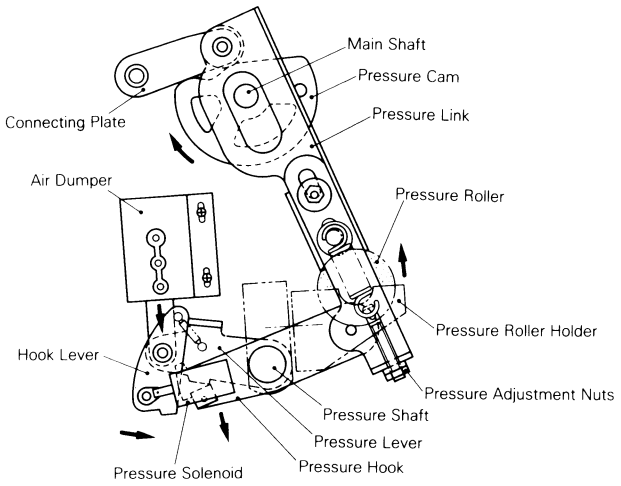
1) When tightening the four screws that fix the Clamp Plate Base, make sure that the Clamp Plate can open and close smoothly.

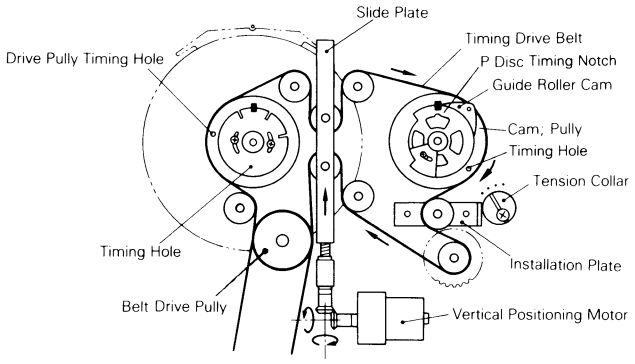


4. DRIVE MECHANISM AREA

1. Removal and installation of Timing Drive Belt

(1) Remove Tie wraps from the Wire Harnesses, and disconnect Connectors.
(2) Remove the Paper Feed Clutch Sensor, I Detection Sensor and Pressure Detection Sensor from the Top Face Plate by removing 2 screws of each sensor.
(3) Remove the E Ring on the Pressure Solenoid, and then remove the Solenoid and Solenoid Arm by loosening the two set screws that attach the Arm to the Pressure Shaft.
(4) Remove the Paper Feed Clutch by removing an E ring and the two outer screws that attach it to the Drive Unit frame.
(5) Loosen the four outer screws of the Main Motor, and remove the Main Motor Drive Belt lifting the Main Motor gently.
(6) Remove the I Disc and P Disc by loosening 2 set screws each, and gently slide them off the shafts.
(7) Remove the Bottom Face Plate (Bottom Left) by removing 4 screws.
(8) Remove the Top Face Plate by removing 5 screws. (Being careful that all wires and connectors are cleared off.)
(9) Remove the Sector Gear by disconnecting a Tension Spring and removing an E Ring.
(10) Remove the Connecting Plate of the Pressure Link by disconnecting a Tension Spring and removing an E ring. Then gently pull the Pressure Link and Connecting Plate off. (Being careful not to bend them.)
(11) Loosen the screw of the Tension Collar, and then remove the Installation Plate by removing the two screws that attach it to the Drive Unit frame.
(12) Remove the Belt Drive Pully by removing the two screws and Attachment Plate that hold it to the Drive Unit frame.
(14) Replace the Belt as shown in the figure below.
(15) After the installation of the Belt, see to the position adjustment of the Cams and Gears.





2. The Check Points in the installation of Timing Drive Belt

To adjust Timing Holes, loosen the Tension Collar and Installation Plate and turn the pully to the proper positions.

<The followings must be done when the Belt has been changed.>

(1) The Drum Drive Pully has a Timing Hole. This Timing Hole must line up with the Timing Hole on the Top Face Plate.

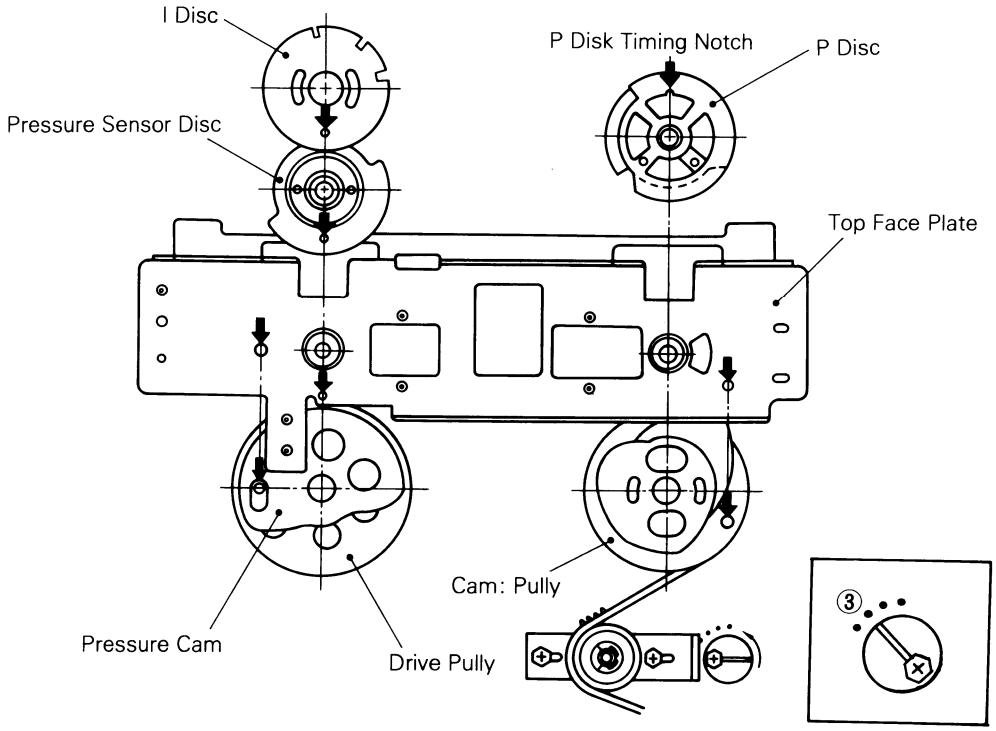
(2) The Cam Pully has a Timing Hole. This Timing Hole must line up with the Timing Hole on the Top Face Plate.

(3) The I Disc has a Timing Hole. This Timing Hole must line up with the Timing Hole on the Top Face Plate. (To adjust it, loosen 2 set screws.)

(4) The P Disc has a Notch cut out on the inside ring. This Notch must be straight up. (To adjust it, loosen 2 set screws.)

(5) Turn the Tension Collar to adjust the tension of the Belt.
(The normal setting is at 3.)

[Timing Chart (at Magnet A Detection Position) & The Position of Timing Holes]

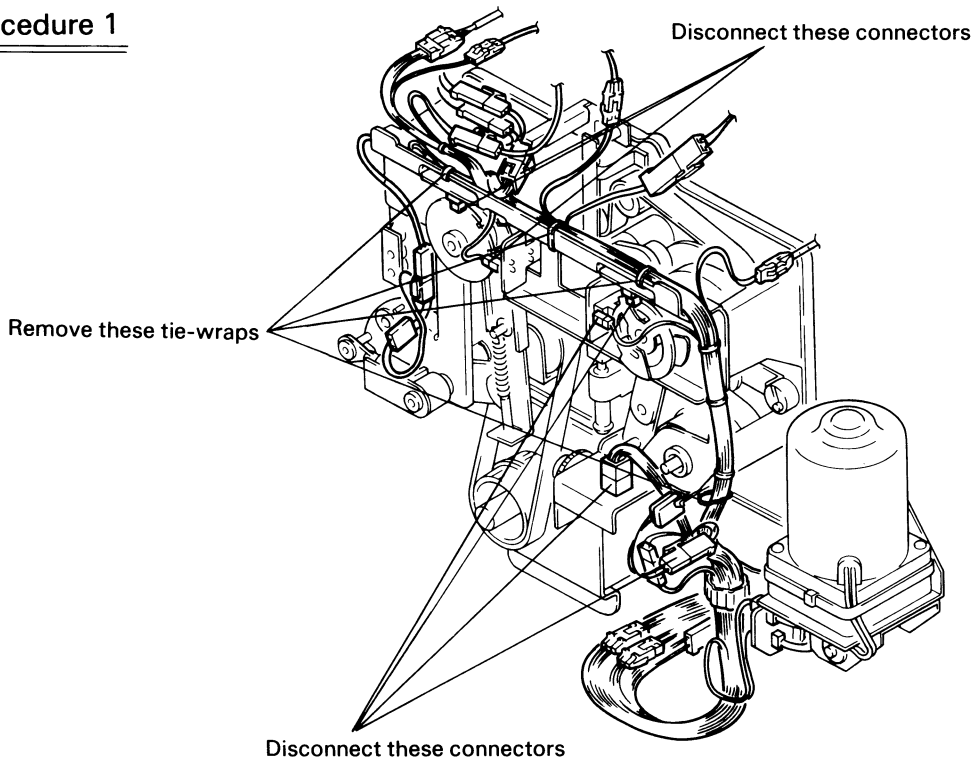


‹The following adjustments must be checked.›

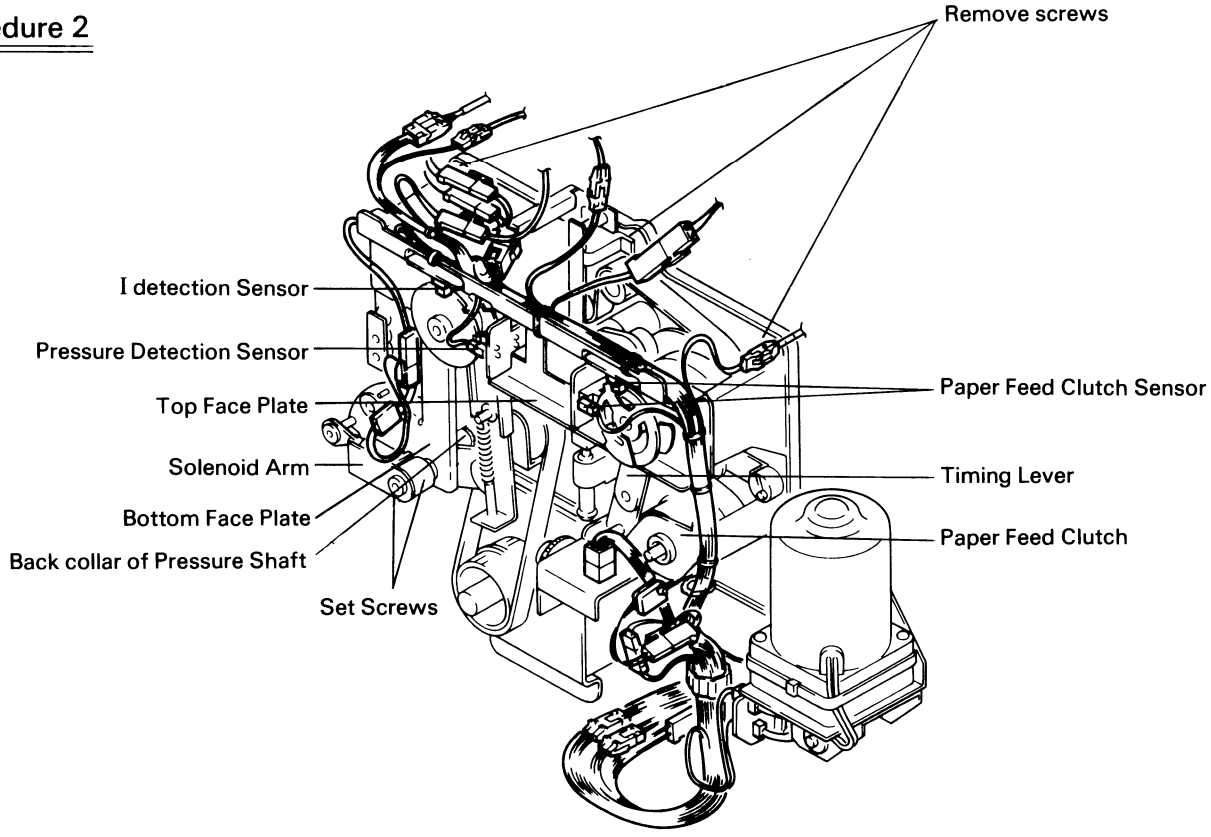
(A) Pressure Solenoid
(B) Pressure Solenoid Arm
(C) Paper Feed Clutch Sensor
(D) I Detection Sensor
(E) Main Motor Drive Belt Tension
(F) Tension Collar
(G) Connect all Connectors
(H) Attach the Wire Harness with Tie wraps to the Top Face Plate
(I) Check the Print Position

!!Attention!!
Check the rotation with the Free Rotation Button before running the machine.

Procedure 1



Procedure 2



3. Removal of Drive Unit

(1) Remove Tie wraps from the Wire Harnesses, and disconnect Connectors.
(2) Remove the Paper Feed Clutch Sensor and the I Detection Sensor and Pressure Detection Sensor from the Top Face Plate by removing 2 screws of each sensor.
(3) Remove the E Ring on the Pressure Solenoid, and then remove the Solenoid and Solenoid Arm by loosening the two set screws that attach the arm to the Pressure Shaft.
(4) Remove the Timing Lever by loosening the two set screws that attach it to the Timing Roller Shaft and disconnecting a Tension Spring.
(5) Loosen the four outer screws of the Main Motor, and remove the Main Motor Drive Belt lifting the Motor gently.
(6) Loosen the two set screws on the back collar of the Pressure Shaft.
(7) Remove the six screws that attach the Drive Unit to the frame, and pull the Unit gently until it separates off.

!!Attention!!

1) After installing the Drive Unit, make sure that all Connectors are connected and that all Sensors are adjusted correctly. Also attach the Wire Harness back to the Top Face Plate with Tie wraps.
(Being careful that all wires are away from the moving parts.)
2) When removing the Drive Unit, it is necessary to perform the following adjustments after installation.
(A) Pressure Solenoid
(B) Pressure Solenoid Arm
(C) Timing Lever
(D) Main Motor
(E) Collar on the Pressure Shaft
(F) Check the Timing of Cams and Gears

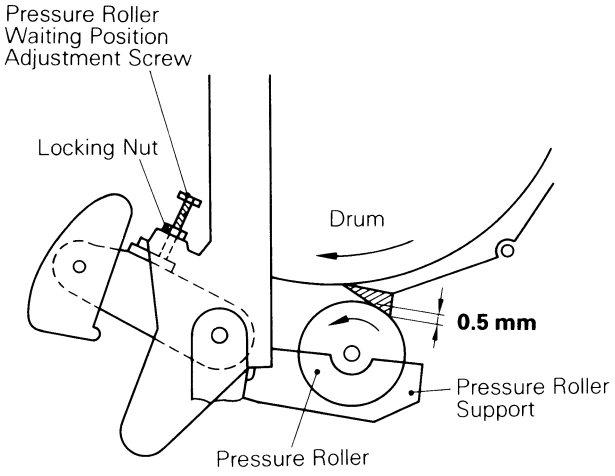
4. Roller Starter adjustment

A Roller Starter has been installed on the Clamp Plate Base. This Roller Starter will start the Pressure Roller rotation before paper is in contact with the Pressure Roller and Drum to stop paper wrinkling. (Fig. 1)

(1) The Roller Starter is adjusted by the Pressure Roller Waiting Position Adjustment Screw.

1) If wrinkles occur, turn the screw a half turn clockwise and run 10 copies. Repeat a half turn and running copies till wrinkles disappear. Then tighten the Locking Nut. This adjustment will increase the contact of the Roller Starter to the Pressure Roller. The correct adjustment is the contact of 0.5mm during printing only. (See figure 1)

2) If the contact is too strong, excess noise will occur during printing. To adjust, turn the Adjustment Screw counter-clockwise.



(Figure 1)

Note:
The check of the touching position can be made by a thin layer of ink on the Roller Starter.
Make one rotation of the Drum with the Free Rotation Button, and check the ink mark on the Pressure Roller for 0.5mm.

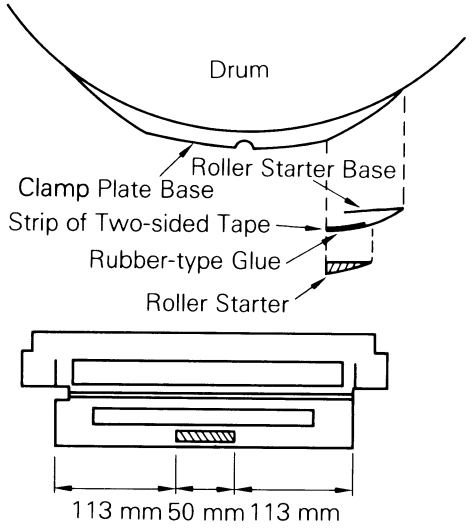
(2) Replacement and positioning of Roller Starter

1) Replacement of Roller Starter and Roller Starter Base

1. Use a rubber-base-type glue to attach the Roller Starter to the Base.
2. Place a strip of two-sided tape under the Roller Starter Base.
3. Take the assembled unit and slide it under the Clamp Plate Base. Then press it firmly to secure.

2) Positioning of New Roller Starter

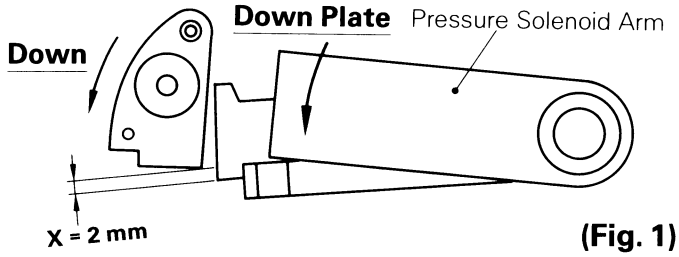
1. Position the Roller Starter on the Clamp Plate Base as the figure right with the taped edge facing the edge of the Clamp Plate Base.



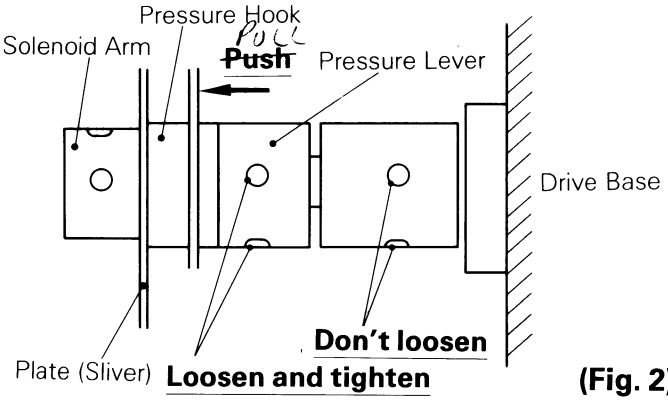
(Figure 2)

5. Pressure Lever adjustment

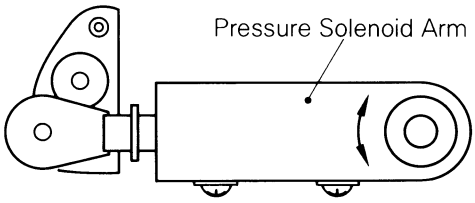
(1) Set a blank Master on the Drum by using the function of Confidential.
(2) Rotate the Drum and secure it at the home position (Magnet A Detection position) so that the Pressure Hook is at the bottom position.
(3) Turn off the power, and remove the plunger and the Pressure Solenoid by removing the E Ring and the two screws.
(4) Loosen the two set screws on the Pressure Lever. (Fig. 2)
(5) Pull down the Solenoid Arm and make sure that the Pressure Roller is in contact with the Drum.
(6) Pull down the Pressure Lever via the Hook Lever so that X in the figure is 2mm, and then tighten the two screws on the Pressure Lever in this condition.
(7) Rotate the Drum until the Pressure Hook comes to the upper position.
(8) Attach the Solenoid to the Solenoid Arm.
(Do not tighten the screws.)
(9) Loosen the two set screws on the Solenoid Arm that attach it to the Pressure Shaft, and install the plunger so that it slides in and out straight and is parallel with the Solenoid Arm.
Then tighten the set screws to fix the Solenoid Arm. (Fig. 3)



(Fig. 1)

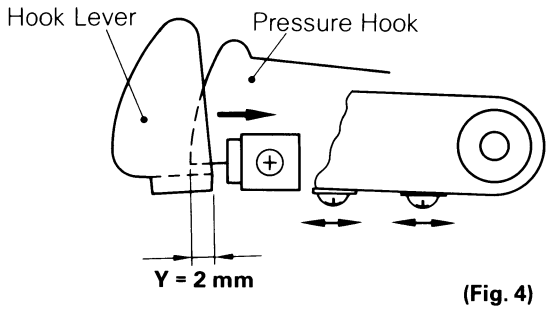


(Fig. 2)

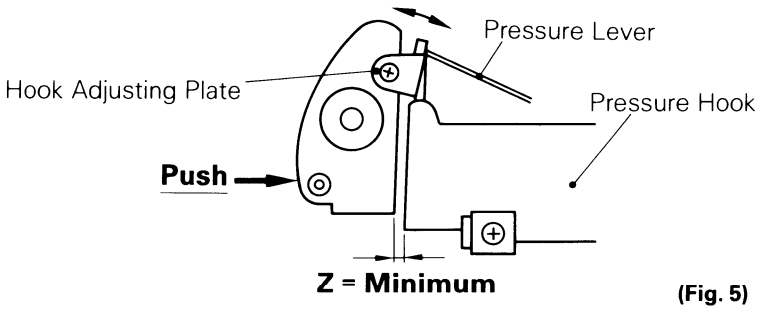


(Fig. 3)

(10) Push the plunger so that Y in the figure is 2mm, and then tighten the two screws on the Solenoid in this condition. (Fig. 4)
(11) Rotate the Drum until the Pressure Hook goes down to the lower position.
(12) Loosen the Hook Adjusting Plate and Push the Hook Lever so that Z in the figure is as minimum as possible. Then make the Hook Adjusting Plate in contact with the Pressure Lever and tighten the screw in this condition. (Fig. 5)
(Make sure that the Hook Lever is not in touch with the Pressure Hook.)



(Fig. 4)



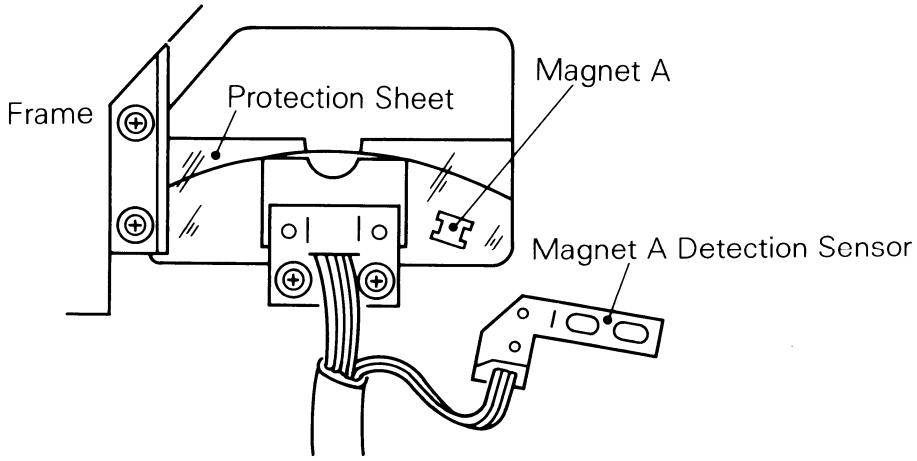
(Fig. 5)

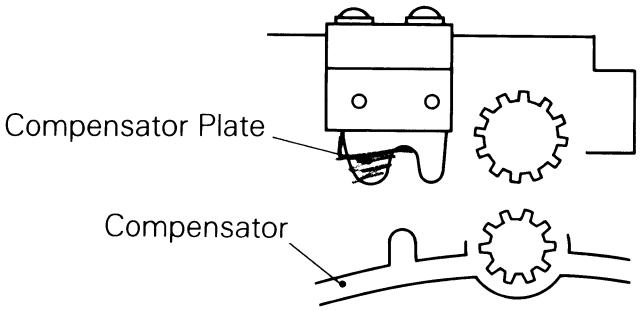
!!ATTENTION!!
1. Push the Pressure Lever to the Pressure Hook (See Fig. 2) so that there is no space between the two, then tighten the two set screws on the Pressure Lever.
2. When X (in Fig. 1) is increased, the printing density will basically become heavier.
   When X is decreased, the printing density will basically become lighter.
   When X is too small, the pressure of the Pressure Roller gets too weak, so that the Printing Area becomes narrower or the printing density becomes weak.
3. Checking Operation after the Adjustment (with a blank Master)
   ‹1› High-speed printing
   ‹2› Printing with the Print Height at the uppest

6. Adjustment of the position of Magnet A Detection Sensor

(1) Remove the Magnet A Detection Sensor.
(2) Secure the Drum in the position at which the Compensation Plate and the Compensator are engaged.
(3) Mark the position of Magnet A seen through the sheet on the transparent Protection Sheet.
(4) Pull out the Drum, and then secure the Magnet A Detection Sensor so that the Hole IC of it fits within the mark made on the sheet by the above procedure
(It is better to check it looking in from the Operation Panel side.)

!!ATTENTION!!
If you change the Drum for color and Magnet A does not line up with the Sensor, don't adjust the Sensor.
Adjust the Magnet A on the Drum to be at the same position as other drums.





5. PAPER RECEIVING AREA

1. Separator adjustment

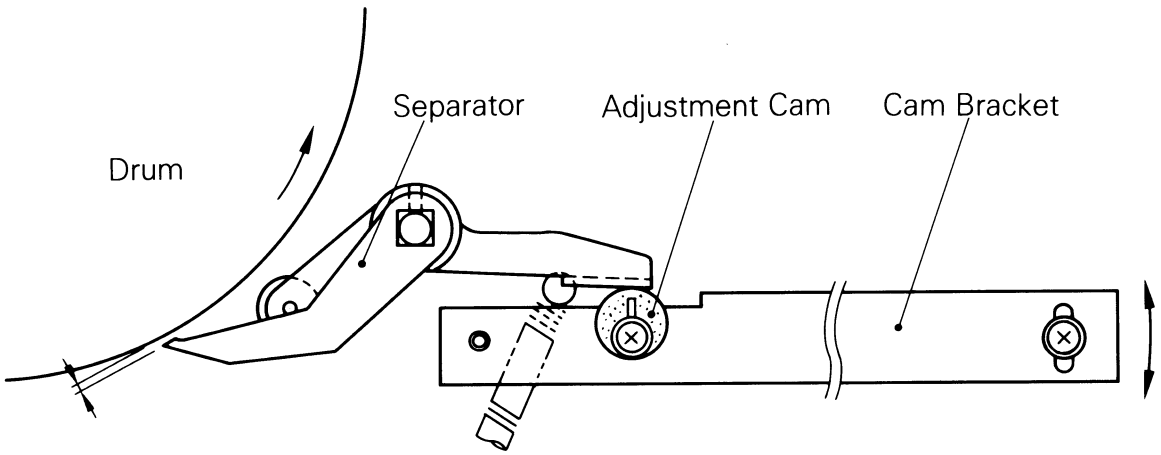
The clearance between the tip of the Separator and the surface of the Drum can be adjusted by the Adjustment Cam and the position of the Cam Bracket. However, the Adjustment Cam is only used for fine adjustment and the Cam Bracket is usually used for adjusting the Separator.

(1) Set the Adjustment Cam at the perpendicular position as shown in the figure.
(2) In this condition, check the clearance between the tip of the Separator and the surface of the Drum.
(3) After adjustment, confirm that the tip of the Separator is not in contact with any part of the surface of the Drum.
(4) If the wide-margined printed paper can't be separated from the Drum, or if the tip of the Separator is in contact with the Drum, adjust the position of the Separator by moving the Cam Bracket up or down.
(5) The Standard clearance is 0.5 to 1 mm.

2. The Removal procedure of Suction Unit

(1) Disconnect 7 connectors on both sides of the Suction Unit.
(2) Remove the 2 screws that fix the Suction Unit on the machine.
(3) Close the Paper Receiving Table half, and pull up and out the Suction Unit.

!!ATTENTION!!
Be careful not to wound the machine.

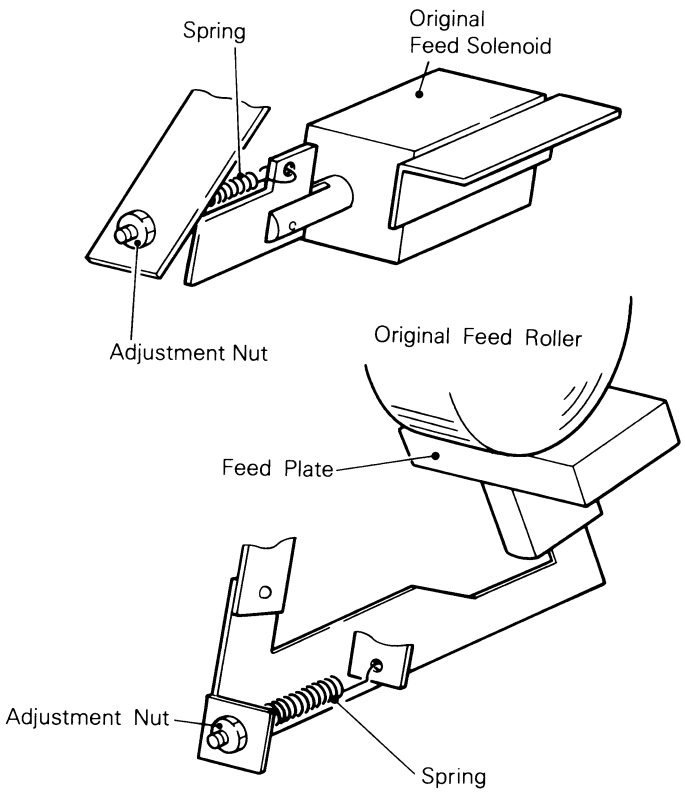


6. MASTER-MAKING AREA

1. Original feeding pressure adjustment

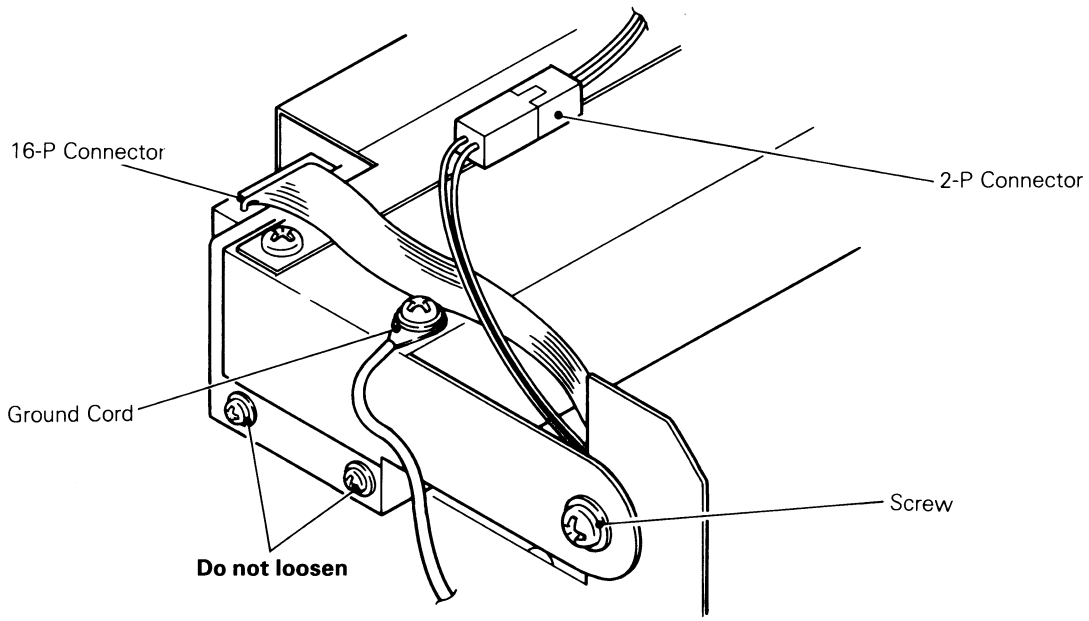
(1) The Original feeding pressure adjustment is possible by the spring pressure of plunger equipped with the Original Feed Solenoid.
Turning the adjustment nut right makes higher pressure.

(2) The Original feeding pressure adjustment is also possible by the spring pressure of the Feed plate.
Turning the adjustment nut right makes higher pressure.

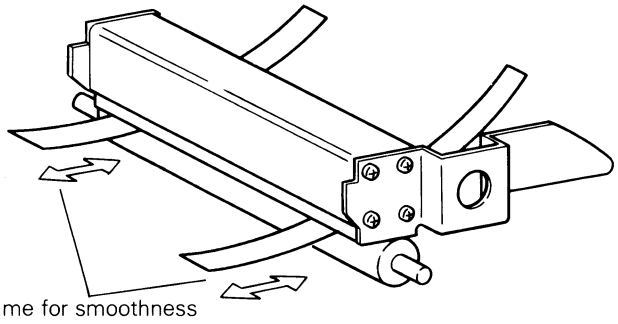


2. Removing the Image Scanner

(1) Remove the upper cover of the Master-making Unit.
(2) Remove the 2-pin connector of the Original OUT Sensor.
(3) Remove the 16-pin connector from the Image Scanner.
(4) Remove the Image Scanner ground cords.
(5) Lift up and turn the Image Scanner.
(6) Remove the screws located on both of the Image Scanner Arms



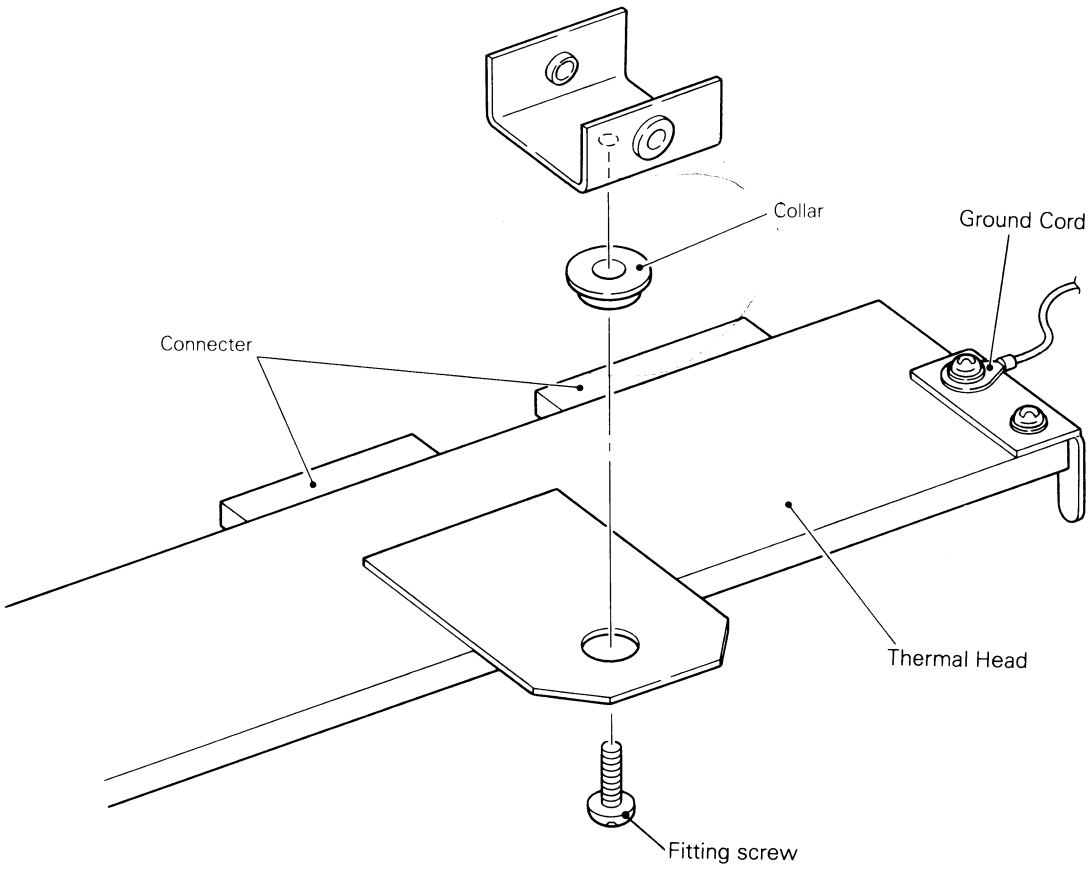
!!ATTENTION!!
1. Be careful not to open the Master-making Unit while the Image Scanner is also opened. This sometimes causes the glass plate to break.
2. Do not bend or drop the Image Scanner.
3. Never loosen the screws on both sides of the Image Scanner because this may cause focus errors.
4. After installing the Image Scanner, check that the Image Scanner is in proper contact with the Read Roller.



3. Removing the Thermal Head

(1) remove the Thermal Head fitting screw.
(2) Disconnect the two connectors (20-pin and 30-pin) from the Thermal Head.
(3) Remove the Thermal Head ground cord.

!!Attention!!
1. Take care not to damage the Thermal Head heat emitting devices.
2. Take care that the connectors do not become charged with static electricity with the Thermal Head removed. Failure to do so may result in damaging the Thermal Head.

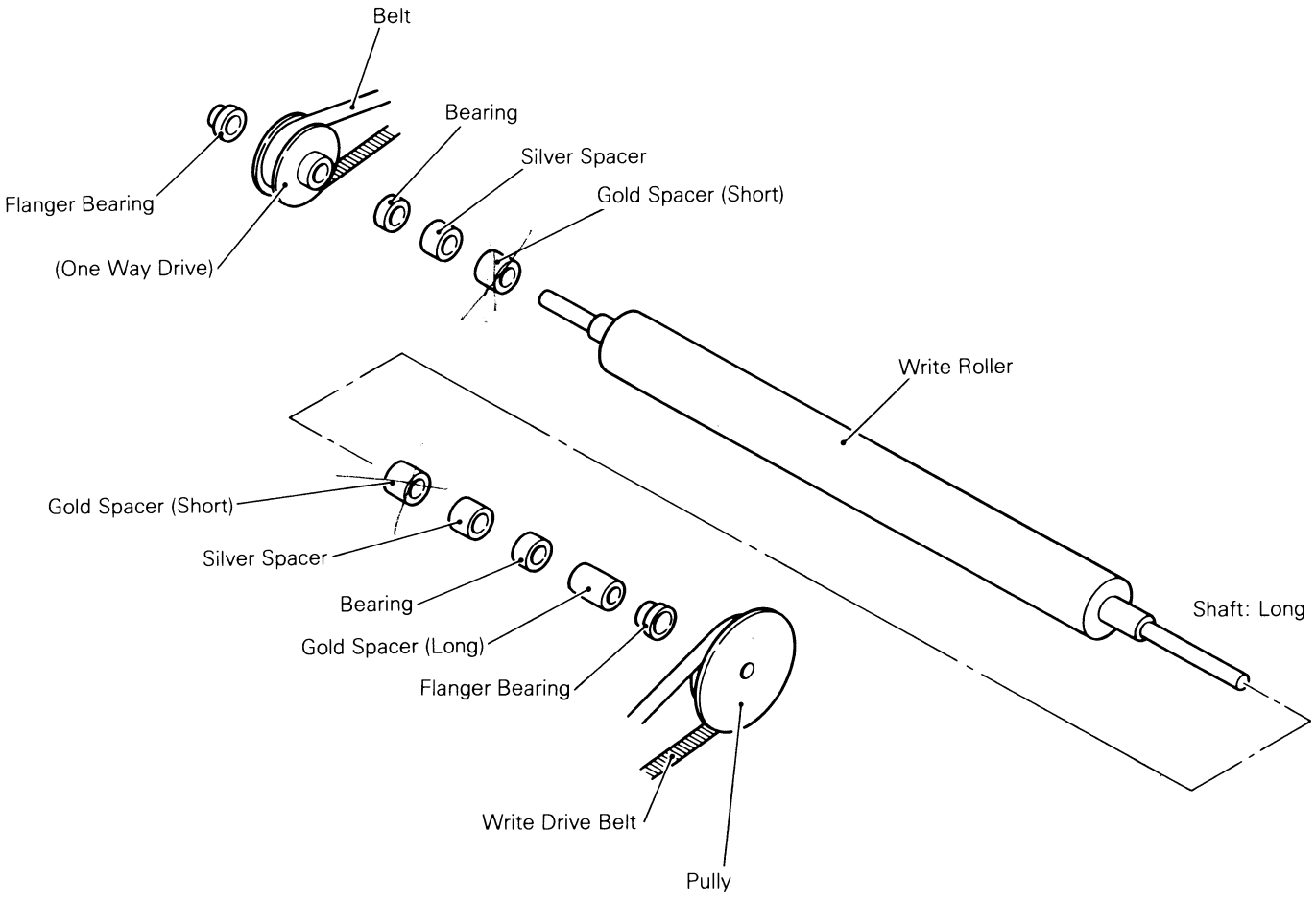


4. Removal of Write Roller

(1) Remove the pully at the drive side by loosening the set screw on it.
(2) Remove the flanger bearing by removing the locking screw.
(3) Remove the belt at the panel side.
(4) Remove the Write Roller by pulling it toward the drive side once and then lifting it up slowly.

!!Attention!!

1) Be careful not to drop any bearings when removing the Write Roller.
2) Pay attention to the correct direction of the pully when setting it.
3) There must be no side-to-side movement of the Write Roller.

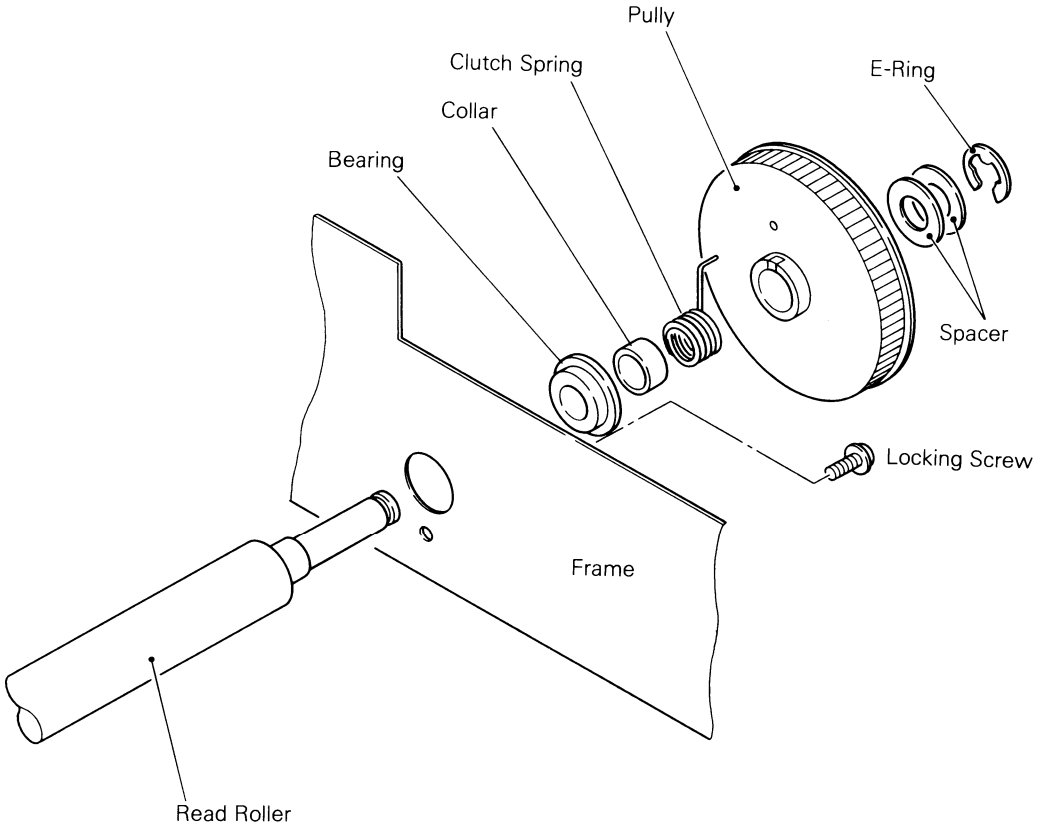


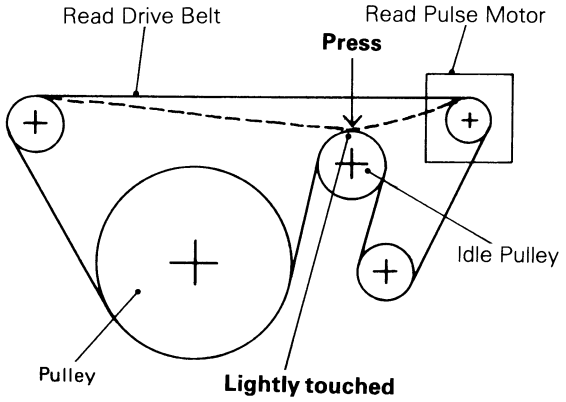
5. Removal of Read Roller

(1) Loosen the tension of the Read Drive Belt and remove it by loosening the two screws that fix the Read Pulse Motor.
(2) Remove E Ring, and Pull out the Pully with a Clutch Spring and the Spacer.
(3) Remove the flanger bearing by removing the locking screw.
(4) Remove the Read Roller by pulling it toward the drive side once and then lifting it up slowly.

!!ATTENTION!!

1. Be careful not to drop the flanger bearing when removing the Read Roller.
2. Pay attention to the correct direction of the pully when setting it.
3. After installing the Belt, check if the tension is not too tight or too loose. (The standard tension is as shown in the figure below.)

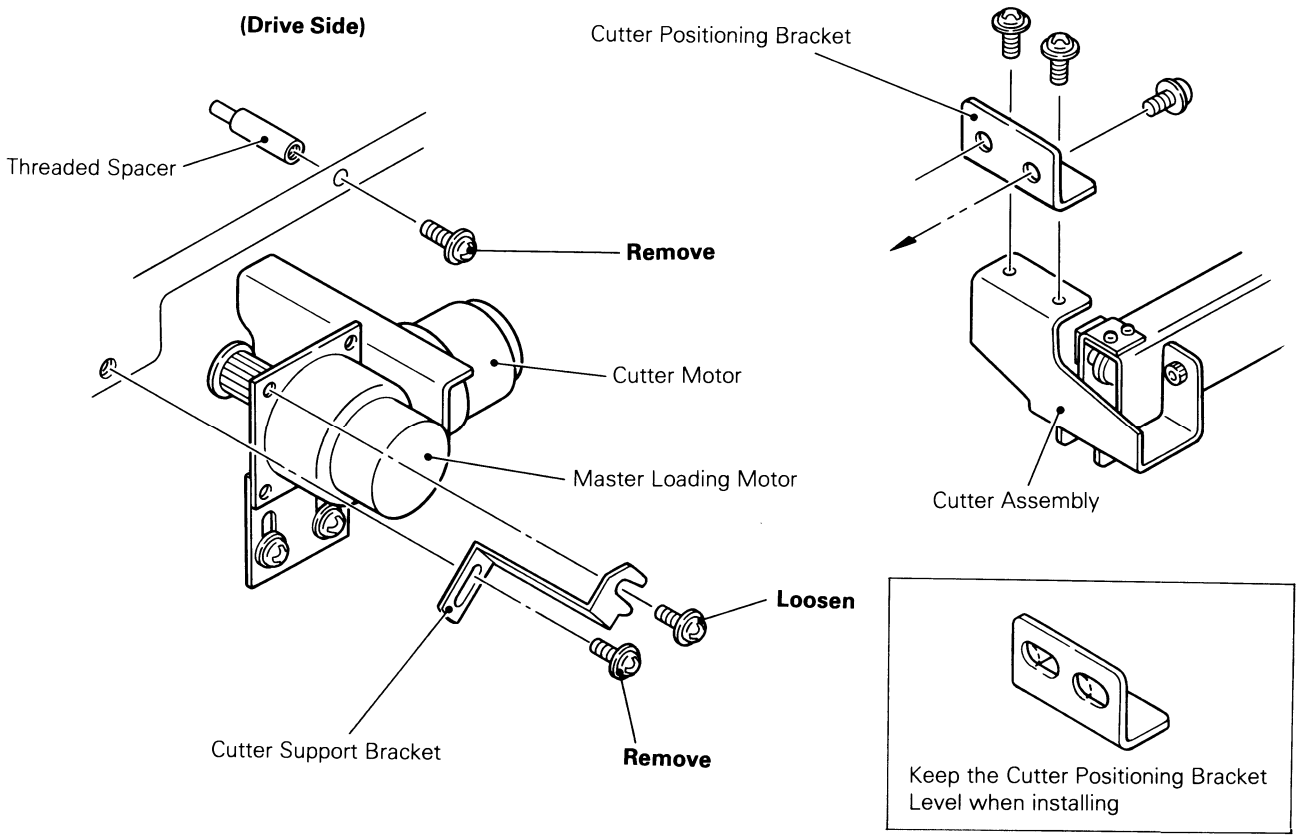




7. CUTTER AND MASTER LOADING MOTOR ASSEMBLY

1. Removal of Cutter and Master Loading Motor Assembly

(1) Disconnect the connectors of the Cutter Motor, Cutter Position Switch, and Loading Motor.
(2) Remove the screw just above the Cutter Motor. When removing the screw, open the Master-making Unit and hold the threaded spacer that the screw is attached to.
(3) Remove the Cutter Support Bracket by removing two screws.
(4) Remove the upper cover of the Master-making Unit, and locate the Cutter Positioning Bracket that attaches the Cutter Unit to the frame (on the Panel side). Then remove the two screws on the Bracket to detach the Cutter Unit from the frame.
(5) Gently remove the Assembly through the cut-out provided on the Drive-side frame.

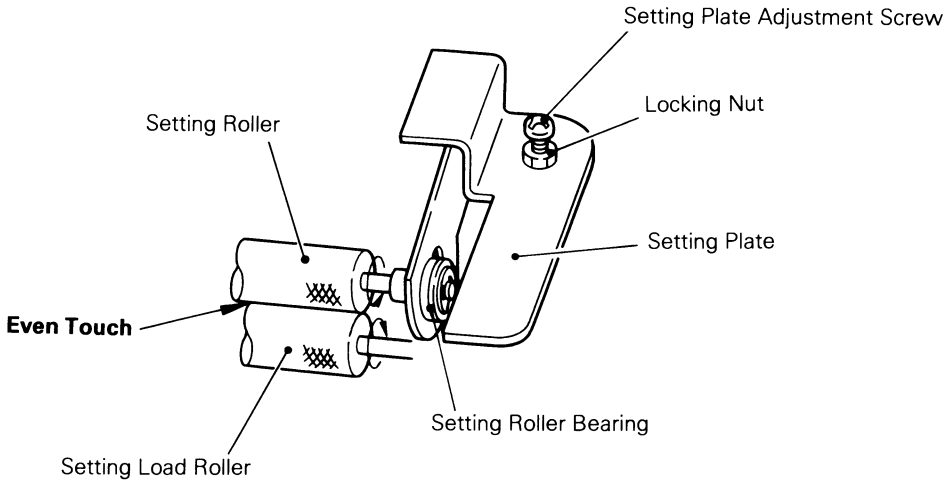


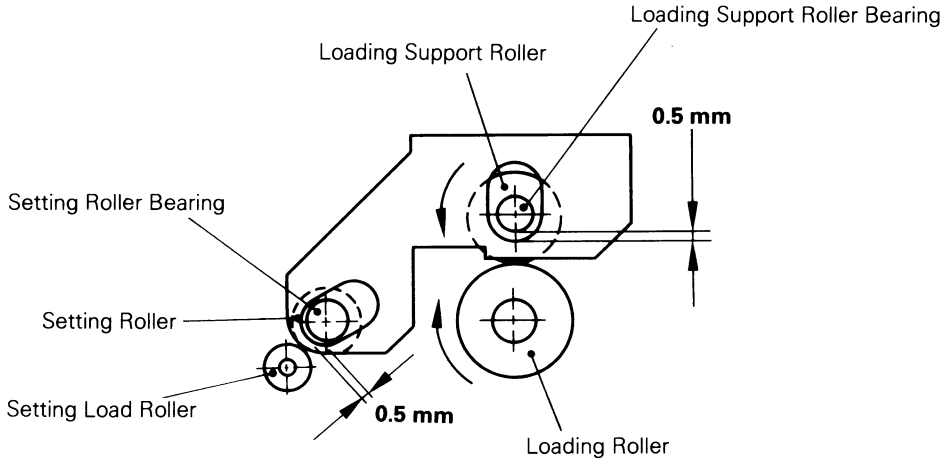
!!ATTENTION!!
When installing the Assembly, aline the Cutter Assembly parallel to the Drum.

2. After installing Cutter and Master Loading Motor Assembly

(1) Adjust the Setting Roller by the Setting Plate Adjustment Screw.
Loosen the Locking Nut and turn the Screw so that the Setting Roller evenly touches the Setting Load Roller from side to side and that there is 0.5 mm gap between the Setting Roller Bearing and the slide cut-out.

(2) After this adjustment, be sure that the Loading Support Roller also evenly touches the Loading Roller and that there is also 0.5 mm gap between the Loading Support Roller Bearing and the slide cut-out.

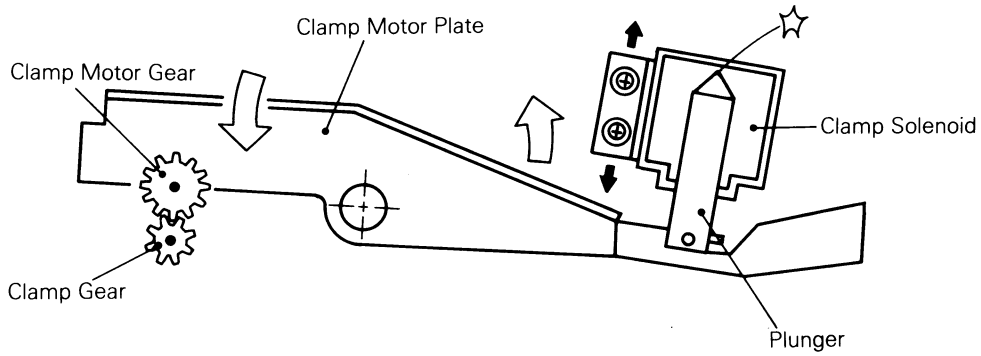




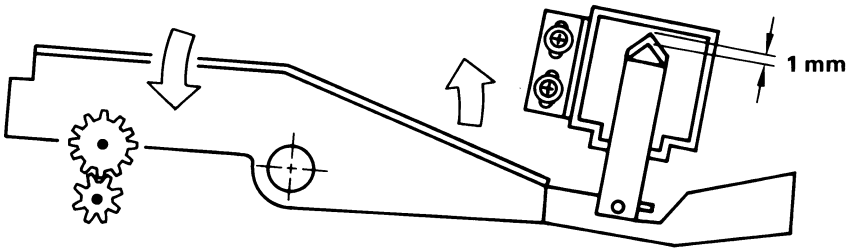
8. CARRIER AND CLAMP AREA

1. Adjustment of the position of Clamp Solenoid

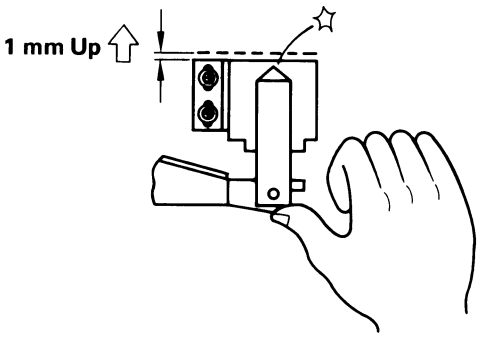
If the Clamp Solenoid is not positioned correctly, as shown below, the tip of the plunger may strike the bottom of the Clamp Solenoid when the plunger is pulled in and the Clamp Motor Gear engages with the Clamp Gear.



The relationship of the plunger to the Clamp Solenoid will be as shown below when the Clamp Solenoid is positioned correctly.



‹Adjustment Procedure›



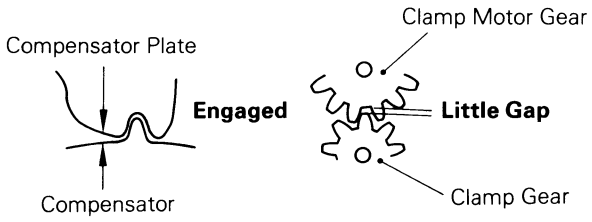
(1) Set the Drum at the home position so that the gears engage.
(2) Loosen the two screws on the Clamp Solenoid Plate.
(3) Press the plunger up with your finger so that the Clamp Motor Gear could engage with the Clamp Gear securely.
(4) Now move the Solenoid approximately 1 mm upwards and tighten the screws.

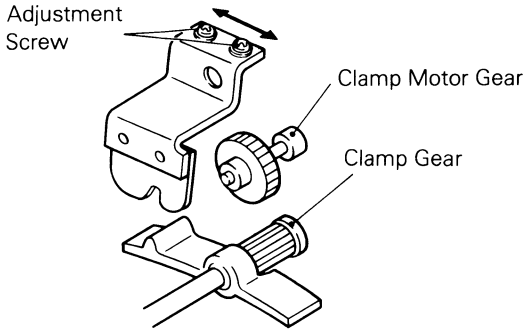
2. Compensator Plate adjustment

To adjust the Compensator Plate, loosen the two screws on it.

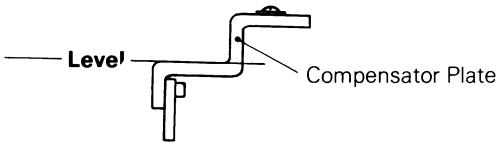
(1) Adjust the Compensator Plate so that it will evenly engage with the Compensator when the Drum is at the home position.

(2) Adjust it by loosening the two screws on it, and then tighten them securely.





!!ATTENTION!!
Keep the Compensator Plate level.

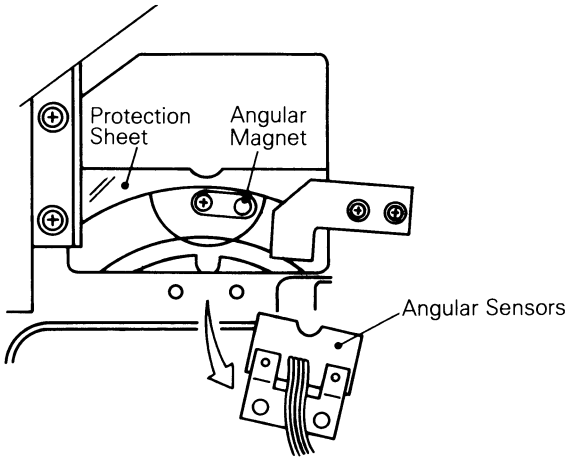


3. Adjustment of the position of Angular Sensors

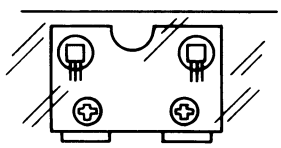
(1) Remove the Angular Sensors.

(2) Secure the Drum at the position where the Compensator Plate and the Compensator are engaged firmly.

(3) Mark the positions of the Angular Magnet (both 0° and 180°) seen through the sheet on the transparent Protection Sheet.



(4) Pull out the Drum, and then secure the Angular Sensors so that the Hole ICs of the Angular Sensors fit within the marks made in the before procedure.
(It is better to check it by looking in from the Operation Panel side.)



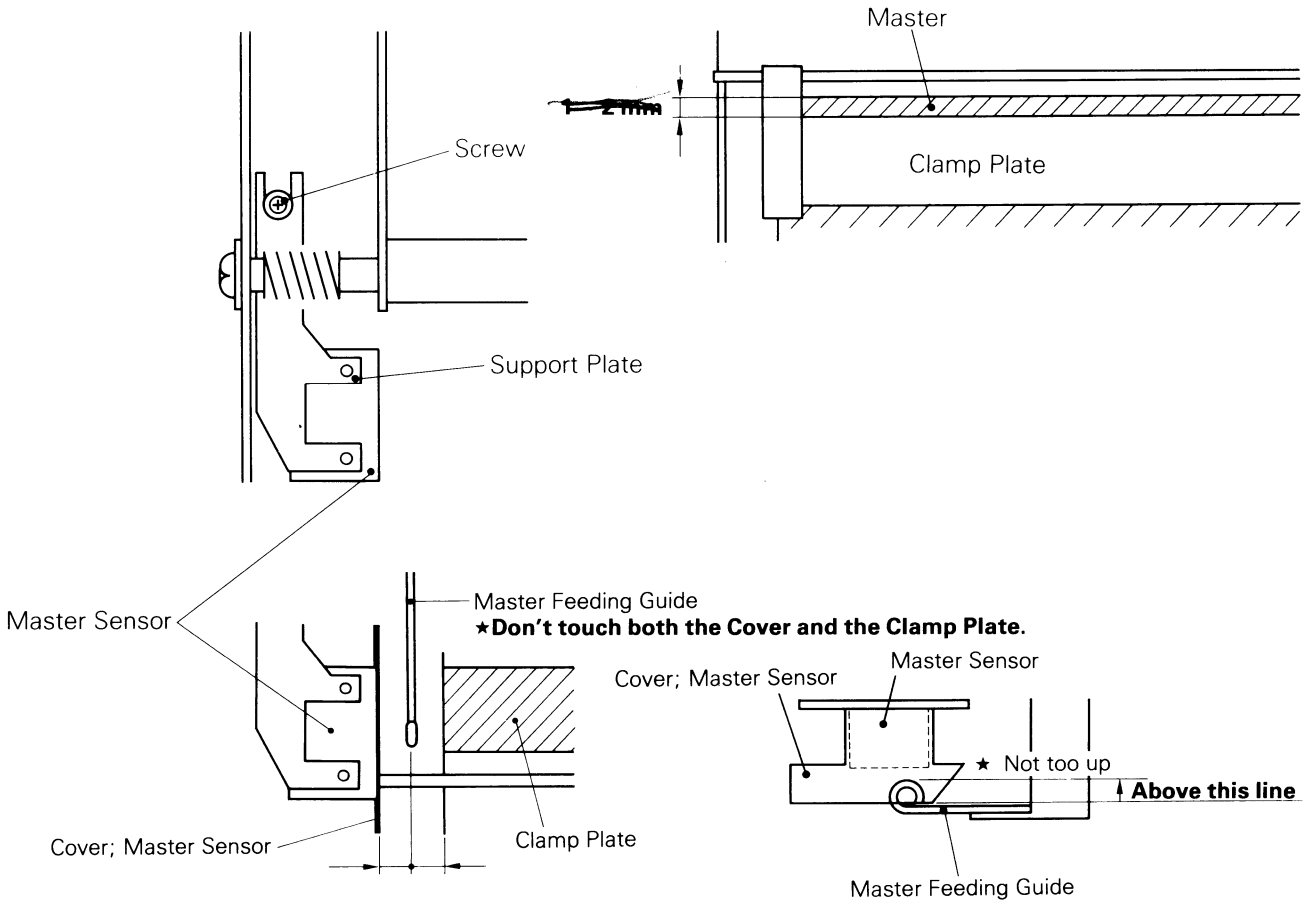
4. Adjustment of the position of Master Sensor

(1) Take off the Upper Cover of the Master-making unit.
(2) Loosen the screw that fixes the Master Sensor on the Support Plate.
(3) Position the Sensor so that the Master Feeding can stop with the top edge of Master 1 to 2 mm peeping out of the closed Clamp Plate as shown in the figure.

!!ATTENTION!!

1. Make sure that the Sensor is out of touch with both the Clamp Motor Gear and the Master Feeding Guide (the wire coming out of the Cutter Unit).
2. Be careful not to position the Sensor too far away from the Clamp Plate Base because it will cause the mis-detection of "No Master on Drum".

(Note)
The Feeding range of Master (How far Master feeds) can be changed depending on the position of the Master Sensor.



9. MASTER REMOVAL AREA

1. Removal of Master Removal Unit

(1) Remove the two screws that attach the Master Removal Unit to the stay.
(2) Open the Front Cover and remove the Master Disposal Box in it.
(3) Remove the cover which protects the cords.
(4) Disconnect the connector. (15p.)
(5) Lift up the Master Removal Unit.

2. Adjustment of Master Removal Hook

(1) Loosen the set screw on the Hook Shaft.
(2) Press the plunger only and adjust the distance between the edge of the Hook and the Clamp Plate to be about 2 or 3 mm as shown in the figure.
(3) Tighten the screw again in this state.
(Notes for Adjustment Operation)
a) When loosening and tightening the set screw, pull out the Drum.
b) When adjusting the distance, rotate the Drum to the position as shown in the figure below.
c) To press the plunger, insert the hand beneath the Master Removal Unit.

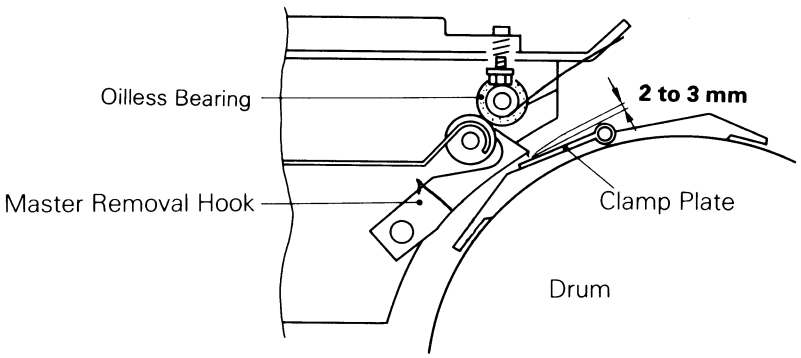
!!ATTENTION!!

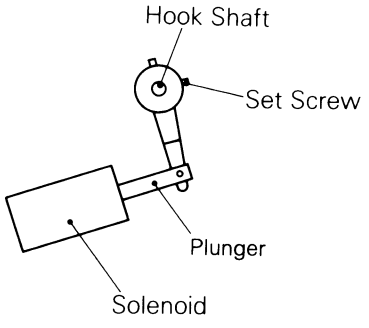
1. When the distance between the Master Removal Hook and the Clamp Plate is wider;

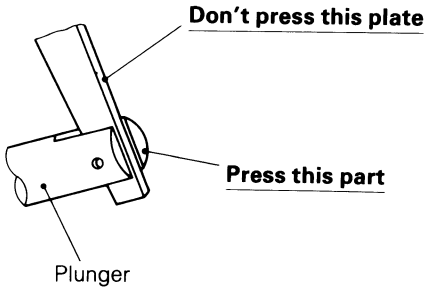
   The used Master cannot be removed.

2. When the distance is narrower;

   The Hook may come into contact with the Clamp Plate and could cause damage to the Drum.





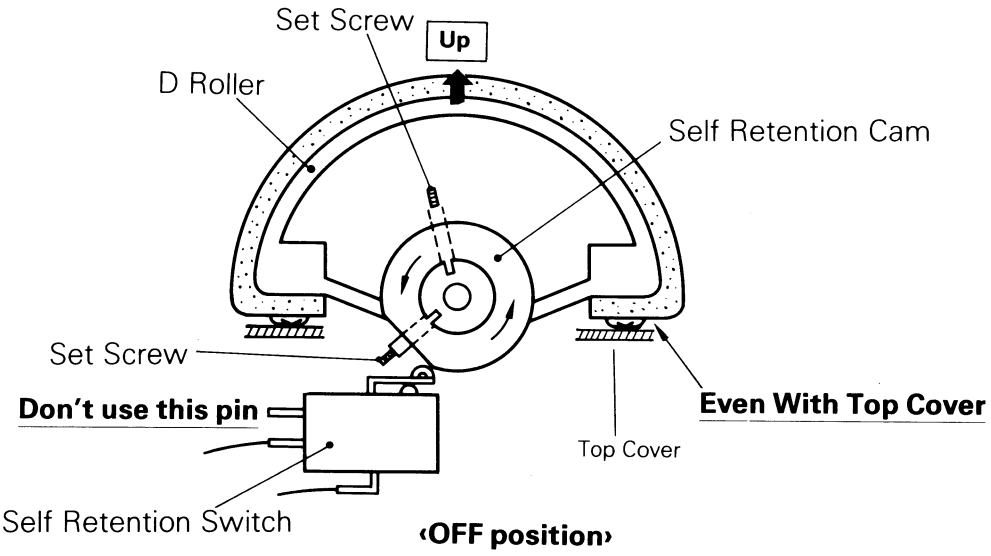


3. Adjustment of the position of D Roller

(1) Remove the D Roller Cover and the front cover of the Master Removal Unit. (To remove the front cover, the Master Removal Unit must be detached from the stay.)

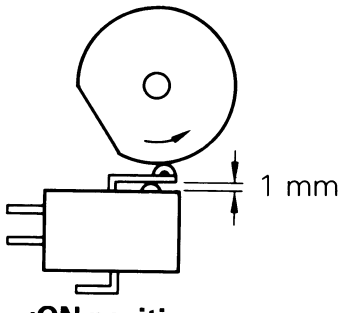
(2) Open the Master Removal Cover and rotate the D Roller so that it is even with the Top Cover. Hold this position and close the Top Cover being sure that it locks into place.

(3) Loosen the two set screws (locking screws) on the Self Retention Cam, and turn it to the position where the actuator of the Self Retention Switch has just been OFF. (See the figure below.)



‹OFF position›

!!ATTENTION!!
When the Self Retention Switch is pressed ON, maintain 1 mm gap so as not to cause damage to the Switch.



‹ON position›